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CLINICAL PSYCHOLOGY
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APPLICATIONS OF
CLINICAL PSYCHOLOGY
IN HAWAII

BY

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APPLICATIONS OF CLINICAL PSYCHOLOGY IN HAWAII

PART I

INTRODUCTION

The Social Problem

One of the most interesting developments of the past twenty-five years has been the application of the methods of mental testing to the delinquent, defective and sub-normal classes. As time went on, the realization of the complexity of the problem brought about an expansion of those methods. It was recognized that mental testing alone would not suffice, but that we must examine each individual not merely as a subject in the laboratory but as an individual in his own world, which might be entirely different from the world of other subjects. Hence it has become necessary to take into account not only the chronological age, but also the race, sex, education, social conditions, inheritance and total background of the subject. In doing this, mental testing inevitably grew into clinical psychology.

To understand the special problems presented to the clinical psychologist in Hawaii, it is first necessary to become familiar with the social conditions in the Territory and in Honolulu. It has now been a little over one hundred years since the first missionaries came to Hawaii, the Sandwich Islands as they were known then, and undertook the bringing of civilization to their primitive people. The Hawaiian of the present day is no longer pure Polynesian—there has been so much intermarriage with other races and nationalities, that it is commonplace to find children with the blood of three races and sometimes even four mingled in their veins.

The Industrial Situation

The agricultural development of the community has been largely responsible for this racial mixture. It was soon discovered that sugar would grow in the islands, but to grow sugar successfully it is necessary to have laborers to hoe the cane and keep the weeds from choking it out. The Hawaiians did not take kindly to this task; working in the cane fields is extremely unpleasant, for the leaves are sharp,

the cane grows thickly and it is hard back-breaking work. It was decidedly not a job for the pleasure-loving, gregarious Hawaiian; he had a taste for the more engaging occupations, fishing, driving teams, or work in which there were periods of strenuous activity followed by opportunities for rest. In this respect his temperamental qualities were similar to those of other Polynesian people. The Hawaiians proving unwilling laborers in the fields, attempts were made to bring other people to the Islands who would do this kind of work. In turn, the South Sea Islanders, Chinese, Portuguese, Koreans, Russians, Porto Ricans, Spanish, and lately the Filipinos have been brought in to work on the plantations but few of them stay very long in the fields; there is a steady drift away from plantation labor toward the city. At the present time over half of the laborers on the plantations of the Hawaiian Sugar Planters' Association are Filipinos, who are the latest comers to the islands. The next largest group is of Japanese, but of these there are less than half the number of Filipinos. The Chinese long ago made their way from the plantations into other phases of industry; the same is true of the Portuguese, Koreans and others. (See Table I.)

The fact that Hawaii, outside of its few towns and its one city, is largely an agricultural community plays an important part in the social adjustments of the people here. It requires only a very limited degree of intelligence to earn the minimum plantation wage of \$1 a day—hence there is an extremely small margin between social sufficiency and social inefficiency. It is a very dull person indeed who cannot adjust himself to the simple demands of plantation life and keep at work sufficiently steadily to earn his living. But immediately there is long continued illness, mental trouble, delinquency, or possibly marital disturbance, the whole family may lose its slender source of support and become dependent upon the community.

Employment in the city of Honolulu which incidentally contains 31.5% of the total island population shows different conditions. The demands of the city are rather more complex but the chief difficulty in social adjustments is that those people who are least capable of meeting the demands of city life are those who are most unwilling to leave the city for plantation work. Thus the problems of mental diagnosis are complicated and a very fine balance must be attained on the one hand lest we deem those feeble-minded who could manage themselves in the country districts, or

on the other hand lest we fail to detect and make proper disposition of the high grade feeble-minded who constitute a very real menace to the well being of the community.

The essential point of the definition of feeble-mindedness* is the inability of the person to attain to self management and self support in the community.

Hence a very careful study of the community conditions is necessary before we can be sure of our mental diagnosis. In other communities, clinical psychology is faced with similar difficulties, but in Hawaii because of the industrial conditions, the problem is greatly accentuated. As a matter of fact, the emphasis must be placed largely on self management rather than self support since even the feeble-minded may be self supporting here. The problem becomes not merely one of mental levels, below which a person cannot be self sustaining—the mental level is only a part of the diagnosis—we must also take into account the psychology of the total situation as regards the individual before we can presume to say who is feeble-minded and who is not.

Defective Stocks

This fact that people of very simple intelligence may be able to maintain themselves here does not diminish the importance of the problem. The menace of the feeble-minded is a very real one. The indiscriminate hiring of laborers from Porto Rico, the Azores, the Philippines, Japan, Korea and China must mean the importation of some of the most inferior elements in these populations.

One young woman of about thirty years, within the security of her married state, from her brood of eight has already presented the Territory with four feeble-minded children; three girls who were sent to the Girls Industrial

*The British Royal Commission in 1908 defined feeble-mindedness as "a state of mental defect existing from birth, or from an early age, due to incomplete cerebral development, in consequence of which the person affected is unable to perform his duties as a member of society in the position of life to which he was born."

Tredgold's definition is "The term 'mental deficiency' in my opinion should be restricted to those persons who are so lacking in general mental capacity, and in commonsense that they are capable of subsisting by their own unaided efforts."

Porteus, in *Studies in Mental Deviations*, gives his definition as follows:—"A feeble-minded person is one who by reason of mental defects, other than sensory, cannot attain to self-management and self-support to the degree of social sufficiency."

School at 7, 9 and 11 years respectively, and after two years there, were sent to Waimano Home for the feeble-minded. This year the mother brought the fourth child to the Superintendent at Waimano with a cheery, "Well, here's another for you." These are apparently healthy children and with all the care that they are receiving at the expense of the Territory have good prospects of living to a ripe old age. Figured at \$500 per capita, the cost of maintaining a child at Waimano Home for a year, this family alone (not counting the other four children to whom no mental examinations have been given) will cost at least \$100,000 provided the children live only to the age of 60 years. The segregation of this family is expensive insurance but it would be three times more costly if put off till the next generation. Such cases are not solitary and probably could be duplicated many times over. In fact the number of instances in which families are represented by more than one member at the feeble-minded home shows that the Territory has been unfortunate enough to acquire some very inferior and neuropathic stocks. If the mainland studies of single 'tainted' families and their ultimate cost to the community through feeble-mindedness are even half true, then the ultimate burden of this Territory in caring for so many inferior families will be a decidedly heavy one. At the present time at Waimano Home, twelve families supply one-sixth of the children already at the Home. These twelve families average at the present time $2\frac{1}{3}$ children feeble-minded enough to require institutional care.

Yet we cannot incarcerate all the dull people of Hawaii in institutions. We are dealing for the most part with the offspring of people of very humble origin. There was a premium upon calloused hands and lack of education when the laborers were sought in other countries for the cane fields of Hawaii. It must be remembered that almost all of the migration to Hawaii is assisted, in fact, the whole cost is borne by the planters. There is therefore no natural selection of the most successful and enterprising of the group. People with a stake in their own land are not anxious to leave it, so that practically all of the laborers were those who had been unable to climb very high in the social scale in their own country.

On the other hand we must remember that emigration took place from extremely over-populated countries where the chances of industrial and social advancement were practically nil. Hence the fact that these people were of low

social grade does not prove that they do not possess capacities for progress and advancement if given opportunity for development in a new environment. This has certainly been the case with the Oriental races in Hawaii. Along with the inferior stocks that we have imported we have also tapped new and perhaps unlimited sources of potential human ability. This much must be said in favor of Hawaii's immigration policy—we have probably been much more fortunate through an immigration from the over-populated eastern countries than if laborers of low social grade had been brought in from the southern countries of Europe. In the case of the Southern European stocks especially when mixed with other bloods, as for example the Porto Ricans, it is seldom recognized that their emigration to Hawaii was the second change of environment for the racial group. There had already been a selection of the best of this stock who would be unwilling to leave the Azores or Porto Rico. For the Orientals, however, this is the first change.

Racial Attitudes

All the racial groups came to Hawaii with very different backgrounds and with very different aspirations and ideals. The Japanese and Chinese seem to have a wholly disproportionate regard for 'book learning'; on the other hand, the Portuguese seem to desire more material possessions, a home of their own is the chief end, and education holds a secondary place. Many of the Filipinos appear to have come to Hawaii to earn money for fine clothes—white flannel pants, a silk shirt, fine straw hat and a gay tie are more important than all the book learning in the world. The Porto Ricans seem to have little ambition—they are apparently quite content with as mean living and slender schooling as they can get without trouble.

We find these attitudes reflected in the children. The Portuguese drop out rather early in the school plan; some are very irregular in attendance and only the best of them go as far as the University. The Orientals however are rarely truant; the difficulty is to get them out of school. Boys of sixteen and seventeen years will stay on in the 5th and 6th grades of school, too dull to profit by the work of the grades, but hanging on with a tenacious grip that baffles the best efforts of the weary principals who would prefer infinitely to have them give up and go to work, instead of thus increasing the educational burden of the Territory. So much is this the case, that the Territorial legislature in 1925

passed a law stating that all public school children who had not passed the fourth grade at 12 years of age should be dismissed from school*. This may lighten the educational burden of the Territory but may quite conceivably add immeasurably to the psychological problems. The dull child, dismissed from school at twelve years of age is too young for steady employment; he may wander about the street and contribute very largely to the toll of juvenile delinquency. It would seem advisable to modify this law making it apply to 14 year old children who have not completed the fifth grade and who are found by mental examination to be too dull to profit by continued academic instruction.

Social Transition Period

The process of Americanization of these children, too, is bringing its own problems. They are breaking away from home influences; parental control is much more difficult than ever it was in their native land for here there is neither the economic stress nor the overwhelming force of public opinion enlisted in support of the integrity of the family and the home. There are so many different races with so many different standards that the Americanized Oriental is bewildered and does not know which are the best to adopt. The Japanese youth see his Anglo-Saxon friend riding about in a cut-down car, or hears him talking freely of the movies or his latest girl; the wonder would be if the Japanese boy did not chafe at his home restrictions. There is another factor too which is not too slight to be mentioned; the older people are still somewhat confused, particularly in Honolulu, with the rush and excitement of an American city. They do not quite understand what it is all about, and hence must take a good many things on faith. This simple belief, and unquestioning attitude of the parents, also, make for more trouble. The children find it very easy to make up tales of staying after school, and being sent on errands, and having to do one thing or another "for some one" so that it becomes very easy for the child to spend his time after school very much as he likes.

Another difficulty is that in a great many homes both parents work and are away from home all day, leaving the children to get on as best they may. The parents naturally are eager for the comforts which money will bring but do

*Probably this law will be repealed by the present legislature (1927) or its provisions substantially altered.

not recognize the effects on their children of the lack of home supervision and control. We must constantly remember that we are asking these people to adapt themselves very rapidly to an entirely new set of conditions and that the transitional period is bound to bring about a great number of serious psychological problems.

If to the complications of a polyglot population which any cosmopolitan city may show we add Hawaii's special handicap of insularity, and the situation is at once more serious. On the mainland there is a constant drift of population from one city or part of the country to another. If industrial conditions in one locality are unfavorable, the unemployed may shift elsewhere. This is true also to a great extent of the socially inefficient. In Hawaii though there may be movement between districts or islands, the community has no opportunity to shift its social burdens. Racial barriers to emigration are a factor in this situation. Whatever burdens we have must be shouldered ourselves.

The City Problems

It seems worth while to point out that while every island of the entire group has its social problems, those of the others are slight in comparison with the difficulties met on Oahu. Here we have the one large city of the islands. We know that the general average of intelligence among the laboring class is low; if it were not so, they would not have come here in the first place. We must then consider the effect on our average laborer of a busy city with all its show and glitter and with its many delights. The contrast between plantation life and city life is so striking that it is little wonder that the laborers crowd to Honolulu at every possible opportunity. On the other islands, this situation is not as serious; the contrast between Wailuku and Paia for instance is not striking and no doubt the laborer at Hamakuapoko finds his little town as satisfying as Kahului. But once a man has experienced the thrill of city life, the crowds in the moving picture theatre, the bright lights, the stores and the amusements there is very little attraction left in the plantation town where everyone is in bed by eight o'clock and up before dawn.

For this reason Honolulu has a great many more socially maladjusted persons than are found throughout the islands. The less intelligent people are going to find it extremely difficult to make proper adjustments to a much more com-

plex way of living in the city. There are certainly serious isolated social problems in the other islands, but they are much less frequent than in Honolulu.

As a matter of fact, for the person of low mentality the plantation provides a very much more satisfactory environment than does the city. Not only is it easier for such a person to earn a living but plantation conditions are such that there is a great deal of social supervision over the laborer. The sanitation of the camps, the health of the laborer and his children and other important matters come under the oversight of the plantation officials. In other words, self management and self support are much easier on the plantation than in the city. The social supervision that is given in Honolulu is necessarily much more haphazard and intermittent. Provided the person keeps out of serious trouble, he does not receive the benefit of any social guidance. While it would be to the interest of most of the laborers to remain on the plantations, nevertheless the drift to the city continues unchecked.

The School Situation

At first thought it might seem that the schools could play a large part in preventing these social maladjustments but we must realize that the schools at present have so many very serious internal troubles that they must confine their efforts to their own special educational problems for a time at least. They have increasingly large numbers of six year old children entering their doors each September; at least 50 per cent of these children are from homes where practically no English is spoken. The rooms are over-crowded, and it is the first grade teacher's duty to teach forty or more shy children to understand, speak, read and write English during that first school year. There is an extremely large amount of retardation in the schools of Hawaii, but the schools have assumed a tremendous task. The teacher has about five hours a day, for five days in the week to teach these children, when she has not only to establish habits of proper speech but also to undo constantly the effects of the pidgin English which is spoken everywhere except within the school room. The only opportunity these children have to hear or to practice proper English is during the time that the teacher can give them immediate supervision.

There are other difficulties in our school system. The curriculum was adopted and planned according to the best

standards of mainland schools; but unfortunately some of our children in many ways do not measure up to the standards of the mainland pupils, hence the present curriculum is not applicable to the needs of a good many of the pupils. They repeat the work of one grade until the teacher in desperation passes them on to the next. We have a manually minded community here, but a study of the present curriculum might give the idea that Hawaii had chiefly white collar jobs to offer its elementary school graduates.

Vocational training and guidance is admittedly a very difficult problem for the schools to handle. The lack of diversity in the industries of the Territory is such that the choice of subjects which are practically related to the future occupation of the children is a very narrow one. There is, however, a very welcome development which is taking place in the educational system in the direction of practical vocational training. Many schools are teaching agriculture and school gardening. The girls in the larger schools prepare the school lunches, but have little opportunity to learn to cook in small quantities and with ordinary kitchen equipment or to prepare any variety of foods. Carpentry is another subject which is taught, but while this is well fitted to the Japanese, there is very little which is particularly suited to the needs of the Portuguese and Hawaiians. As all children cannot have manual training, a needful factor in the situation would appear to be the careful selection of those pupils who can profit best by this form of instruction.

It is a fact that many of the children in the public schools reach their limit in ordinary education at about the sixth grade, which means that a great many never get that far. As a result those children who most need the elementary manual training are those who receive none at all. They are given an unrelieved diet of reading, writing and arithmetic and are permitted to repeat grade after grade even though there is admittedly no prospect of success for them. It is little wonder that the major part of delinquency begins in truancy from school.

There is an Opportunity School in Honolulu but it is so situated that it is accessible to only four schools which makes it practically impossible to send children there under ten years of age. The Junior High Schools have been started and they should help a great deal to divert numbers of duller children from McKinley High School, but it will not help the children who have not reached the sixth grade, and

who could profit very well by serious practical training, but who are not capable of doing regular academic work. The Oriental children seem comparatively undismayed at endless school failure, and appear to have the idea that education is merely a matter of time, and not of the capacity of the individual. The Hawaiians and Portuguese children have a different attitude however; if the school is to hold them it must provide a different sort of mental pabulum.

It is said that one Hawaiian boy left home every day to all intents and purposes on his way to school with his books in his hand. One day his mother appeared at school to find him; and discovered not only that he was not there, but had not been there for four years! He had been able to keep up the fiction of school attendance at home, and for all that time had the freedom of the city, day in and day out.

Transient Population

Another factor which bears heavily on the maladjustment of our adolescents is the presence of the army and navy. In spite of the best efforts of their commanding officers, the enlisted men and the sailors are constantly picking up girls on the streets and contributing to their delinquency. The part-Hawaiian girls seem to be associated most often with the soldiers; they are attractive and the 'good-time' girls usually manage to live up to their name. There is an easy code of morals and the men are anxious for their favors, which helps to explain why so many girls are sent to the Industrial School on a charge of immorality. In many cases marriage takes place, but this does not help the total situation for the soldiers are frequently transferred and desertion is a common way of avoiding the irksome responsibilities of parenthood. The girls are not the only ones who are helped to stray on erring paths. The presence on the streets of hundreds of young men whose only object in visiting Honolulu is to seek amusement and relief from the tedium of military life is sure to provide opportunities and example for youthful offenders. This is no criticism of either the military system or soldiers as such. It would be equally true of any other body of young men under similar circumstances. The recreational program of the army posts not only helps to keep the soldier at home but must be classed as social work of a high community value.

The army and navy must not be made to carry all of the blame for immorality and juvenile delinquency. Honolulu has all the disadvantages of a sea-port, the streets are full of sailors all of the time; all with money and anxious to have a pretty girl's company and a good time at any expense. How much trouble transients of this sort cause can only be guessed at, but the possibilities are infinite.

The ships bring in sailors, a commonly recognized doubtful asset, but they are also bringing in tourists by the hundreds. This means that there is a splurge of wealth and numerous opportunities to pick up easy money. From the moment that the big ships enter the harbor, the trouble begins. When the Franconia on its round-the-world tour came in, the harbor was alive with diving boys who were so liberally rewarded for their begging that when one tourist threw a shower of pennies on the dock one of the boys threw them back, saying, "Big one!," meaning that silver was much more to his taste. Aside from the fact that the boys receive more money than is warranted for their diving, there is another danger in that they come into contact with the worst sort of associates around the docks.

In a situation of this sort there seems to be little remedy. The tourists come to the Islands with plenty of money, and there is no way to stop the indiscriminate tipping that they indulge in. The boys naturally take advantage of the visitors' curiosity, and so it goes, a tip for opening a coconut, a tip for strumming an ukulele and whining "Aloha Oe," a tip for posing for a picture. Is it any wonder that the youth of Honolulu gets into mischief when there is so much easy money to be earned in this way, and so little need for steady application to any kind of work?

The Psychological Clinic

With all of these problems it is then not strange that there is a real need for psychological examining and for research to see what can be expected of these people, whether these present problems of social maladjustment are purely temporary and incidental to the immigration of such large numbers of people or whether there are serious defects of intelligence or temperament in these racial groups which will militate against any permanent adjustment even under the most favorable conditions.

The growing interest in welfare work with feeble-minded and delinquent children resulted in the organization of the

Psychological and Psychopathic Clinic by act of the Legislature of the Territory of Hawaii in April 1921. The purpose of the Clinic was defined as making mental examinations of persons at the request of the courts, industrial schools, board of health, department of public instruction and other public institutions and organizations, parents, or guardians; in additions, to institute research in the field of mental differences.

In the six years since its origin, the Psychological Clinic has had a growing importance in the community. The first work was chiefly for the social agencies and the juvenile court, but there has been a growing demand from the public schools so that it is necessary to select only the more serious cases; it would be quite impossible with the existing staff to give an individual mental examination to all the children referred. The policy of the Clinic has been to confine itself almost entirely to individual examining; group tests may be given by a competent teacher but the problem of mental diagnosis is a matter for experts. The work of the Clinic has naturally become divided. There is the permanent station at the University of Hawaii, and there is also a traveling clinic which goes into the schools not only in Honolulu, but on the other islands as well. The co-operation of the public schools and social agencies is invaluable to the proper working of the Clinic for our duty is only to make recommendation for the treatment of individual children; it is for the schools and other agencies to see that the necessary adjustments are made.

It will have been gathered from what has already been said that in the field of clinical psychology in Hawaii, most of the work is concerned with juveniles who are referred for examination either because of social difficulties or because of faulty adjustment to the demands of the public school system. The social misfits are of three major kinds, dependent children, juvenile delinquents, and feeble-minded. These groups are naturally not mutually exclusive but they are helpful in making a rough classification of the children examined.

Juvenile Delinquency

The extent of juvenile delinquency that is serious enough to be brought before the local court in Honolulu may be judged from the following figures taken from the report of the juvenile division of the court of domestic relations for the 1925-26 period. 432 children, 326 boys and 106

girls were brought before the court. Of these 231 boys and 99 girls, a total of 330 children were declared delinquent. There were also brought before the court as dependents 45 boys and 77 girls. In the disposition of these cases it is extremely valuable if a psychological examination is made with careful inquiry into the child's personal history. Disciplinary measures are frequently effective for a bright boy, provided he is not confirmed in his anti-social habits; on the other hand, all the discipline in the world will not prove effective for a dull, suggestible child. He needs careful and constant supervision and training in right habits of conduct. In the same way, a great many of the girls who come before the court are charged with immorality but there is a great deal of difference between the immorality of a slow-witted easy going girl, over-anxious to please, and the same tendencies in a bright girl who is not particularly suggestible but who has a very well defined sex urge which she does not wish to curb.

It is interesting to compare the amount of juvenile delinquency in some of the mainland cities with the percentage in Honolulu. The best statistics available for this purpose are contained in "Juvenile Courts at Work" by Katharine F. Lenroot and Emma O. Lundberg, Publication 141 of the U. S. Dept. of Labor 1925. The cities of more than 100,000 and less than 1,000,000 population were studied with regard to the organization and methods of work of the juvenile courts.

Comparison of these cities (See Table 2) shows that when the amount of delinquency is calculated on the basis of the number of delinquents for every 1,000 population, Honolulu occupies a very favorable position. Los Angeles has the smallest figure, 1.403 delinquents per 1,000 population; San Francisco second with 1.569 and Honolulu third with 1.949; Boston is at the bottom of the list with 5.873 delinquents when compared with the population. The Boston Juvenile Court serves only the central districts of the city, which undoubtedly has a larger percentage of delinquents than would be the case if the district included more of the better class of residential centers. The jurisdiction of these courts differs in some respects but in general the figures for the cities are comparable.

Dependency

The figures for dependents are interesting but different conditions in the cities studied make them less comparable

than the figures for delinquents. Honolulu has sixth place in number of dependents; Buffalo having the lowest number .065. San Francisco had an unusually high percentage of dependents which may be accounted for by the fact that the court granted county aid in the form of pensions to many children in their own homes.

In Honolulu some of the dependent children are cared for by the court, but a good many dependents are cared for in other ways. The Board of Child Welfare for Oahu pensioned 145 families in 1925*. There were 141 mothers with their children and four families of orphans, 557 children all told. A fact of serious importance among these dependents is the high percentage of tuberculosis. 38% of the families under the supervision of the Board of Child Welfare were tubercular contacts and 36 fathers of these families were actually at Leahi Home. Children are extremely susceptible to this disease, and every care is necessary to keep them from contracting it. A tubercular child is practically disabled, dependent upon others for care; and disablement before the child has finished his education may mean that he never can make up that lost ground.

In the summer of 1925 all the children of school age in these dependent families in Honolulu were given a mental examination to determine their mental status. The Social Service Bureau which distributes these pensions considered that a constructive program for these children could be made easily if they knew just what the intellectual capacities of these children were. On the basis of the mental examination it could be determined what proportion would themselves be likely to be dependent, which ones were capable of profiting by industrial training, and for which ones it would be worth while to provide academic opportunities beyond the eighth grade. The results of these examinations will be discussed later.

Extent of Feeble-mindedness

The definitely feeble-minded are no more serious a problem here than on the mainland; that is, the percentage of feeble-minded persons is probably less than 2 percent. As we have shown before, Hawaii is chiefly an agricultural community, hence it is perfectly possible for a person with a low level of intelligence to adjust himself to the community life. On the plantations there is a demand for a large

*The Social Service Bureau 26th Annual Report; Honolulu, 1925.

supply of unskilled laborers; it is only necessary for a man to be able to handle a hoe and do as he is told; initiative and intelligence are not at a premium in this sort of task. If the Stanford Binet tests were applied to these people, the average level of intelligence would very probably be little better than what is considered a feeble-minded level on the mainland. The fact remains however that these people are making the necessary adjustments on the plantations, are valuable workers, can take care of themselves, and hence cannot be considered feeble-minded. The curve of distribution of intelligence in this group would show the mode much lower than that of an ordinary community, but there is the same proportion of cases falling into the extremes, and the definitely feeble-minded are no more numerous in proportion to the rest of the group than in any other community.

At the same time, in the matter of individual diagnosis, the difference between city and country children must be considered. A country boy with an intelligence quotient of 65 would rarely require institutional care, so long as he remained on the plantation; but a Honolulu bred boy of the same intellectual status would be very much more likely to require institutional care and training through the adolescent period at least.

SUMMARY

Summing up the situation, we find that in Hawaii, and particularly in Honolulu, there are certain definite factors leading to maladjustment. We have large numbers of very dull people, well adjusted as plantation laborers but transferring their abodes to a rapidly developing city with all the temptations inherent in this development; there are various large racial groups with different languages and different customs living within the confines of the city, with the children attending the public schools. The only common language for all these groups is a jargon of pidgin English, made up chiefly of Hawaiian words. The schools have constantly to break up wrong habits of speech and establish new ones which are promptly forgotten or seldom used. Considering the very definite educational problems which face the schools, they cannot be expected at present to concern themselves with the moral and social adjustments of the pupils. The children are breaking away from parental control, which means that there is a serious problem of juvenile delinquency. The presence of large numbers

of unmarried men among the soldiers and sailors, and the increasing numbers of tourists are also adding special temptations particularly to the adolescent boys and girls. In addition Hawaii is so widely separated from the mainland that these social problems are here to stay, and more are being added with every ship load of immigrants that come to her shores. Finally, the school situation is such and the educational difficulties are so great that children frequently begin their social maladjustment while they are still in the school grades.

It is one of the purposes of this thesis to set forth the results of examination of these maladjusted children; discuss the tests which have been applied, and explain why certain ones are valuable and others not so valuable. There will be also some discussion of the variations in procedure which have been made on the basis of our experience in applying intelligence tests to these children. This much will be concerned with the methodology of applying mental tests; there will also be a review of the conclusions which are important in their bearing upon research in the field of mental differences in racial groups. There will be included a few case histories which will give some idea of the kind of problems constantly recurring in any kind of social work carried on in the Islands. It is hoped that there will be contained herein information which will be valuable to any persons working in the field of mental diagnosis in these Islands.

PART II

PREVIOUS WORK

Racial Comparisons

In the matter of fixing test standards which would indicate the lower levels of normality, it may be necessary to consider the factor of race. In the same way as the rural child's intelligence must be compared with that of other children in a like environment, so we must consider the Filipino child, for example, in comparison not with white children, but with other Filipinos. It is obvious that a white child with an intelligence quotient below 65 would be unable to function satisfactorily in a white community. A Porto Rican child with the same intelligence quotient would not be so far below the average of Porto Ricans as to make it impossible to compete successfully with others of the same race. This raises the question of racial levels in intelligence tests, a consideration of great importance to the practice of clinical psychology in Hawaii.

Until very recently no systematic work had been done to find out exactly what is the average intellectual status of the various racial groups in Hawaii. The present outstanding contribution is "Temperament and Race,"* the first attempt by the use of objective scales to describe the temperamental qualities of these people, to determine the average mental level of the predominant racial groups and its bearing on national progress.

In order to determine the nature of racial characteristics, the authors applied a social rating scale to the different racial groups in Hawaii, choosing judges for this purpose who were well acquainted with people of the different nationalities represented in the Islands. Among these judges were a good many plantation managers, social workers, educators, and others. These people were asked to rate the Chinese, Japanese, Portuguese, Hawaiians, Filipinos, and Porto Ricans according to the traits of the scale. The seven points of this scale were as follows:—planning capacity, self determination, prudence, resolution, self control, stability of interest and tact. Each racial group was rated

*Temperament and Race. S. D. Porteus and M. E. Babcock. Published by Richard Badger, The Gorham Press, Boston 1926.

on each trait by each judge; the average of these ratings was determined which provides a consensus of opinion of these people.

The results of the application of the scale may be briefly outlined. The Japanese were decidedly ahead of all the others in planning capacity and resolution. They are also first in stability of interest, equal to the Chinese in ability to inhibit impulsive action and also in self control. They are slightly inferior to the Chinese in suggestibility, and markedly inferior to them in dependability. The worst rating for the Japanese is in tact, where they fall lower than any other racial group.

The high points of the Chinese are in dependability, and stability of interest; while the Portuguese have their best ratings in planning capacity, stability of interest and self determination. It is interesting to note that the Hawaiian's high points are those which are low on the Portuguese ratings; which might indicate that the Hawaiian and Portuguese are at exact variance in temperamental traits. The Hawaiians score best in resolution, self control, prudence, and are highest of all the races in tact. The Filipino curve follows the Hawaiian very closely but at a lower level on the scale. The Porto Rican has consistently low ratings except for self determination and tact, the only two in which he scores two or more.

These ratings were all made by people who were not representatives of any of the racial groups under consideration and since they were not asked to rate their own race the comparisons are much more valid. The social ratings scale idea was carried a little farther in order to express a social efficiency index on a percentage basis. The weighted indices for the races then were as follows:

Japanese	85.5
Chinese	82.6
Portuguese	60.
Hawaiian	51.4
Filipino	33.
Porto Rican	33.3

From these ratings we gain an excellent idea of the value of these racial groups to the community. If our population becomes over-loaded with Filipinos or Porto Ricans we may expect to pay the price in increased social service work, in larger jails, reformatories, feeble-minded

homes, public hospitals and all other things which are necessary to help socially inefficient people to get along. We should remember however, that the Filipinos are the newest arrivals in the Islands and hence have very probably suffered in comparison with the more familiar racial groups.

Intellectual Differences—Binet Tests

More pertinent to our present discussion, in "Temperament and Race" we find the results of Binet and Porteus Maze tests applied to nine, twelve, and fourteen year old Japanese, and Chinese boys and girls, and also to nine, twelve, and fourteen year old Hawaiian and Portuguese boys. Here we are given the average Binet test age and intelligence quotient, and the average Porteus Maze test and I. Q. for these public school children. A careful analysis of the Binet tests is given, showing why some tests are unsuitable for school children of Hawaii, and giving a modified scale which is especially adapted for use in the Islands. On the basis of these findings, the modification of the Binet tests has been adopted for use in the Psychological Clinic for all referred cases.

When these tests were divided into two groups, tests of native capacity and tests affected more closely by environment, certain differences stand out, which were not emphasized in the discussion. We find that in the memory for designs the Oriental children are superior to both the Portuguese and Hawaiians at the 9 and 12 year levels. This test is so often passed by young Oriental children that it has become a matter of routine to give the designs test to every Oriental child over 7 years of age. The Portuguese find the repetition of three digits backwards more difficult than do the Oriental and Hawaiian children of the same age; the same is true of the reading and report. On the other hand, the memory for six digits in order, a pure rote memory test, is passed much more frequently by the Portuguese than either the Japanese or Chinese. Hence while we must not omit the memory for designs test with the young Japanese child, for the same reason we must be very careful to give the Portuguese the six and possibly seven digits in order. It apparently is characteristic of the South Europeans to excel in straight rote memory tests; experience of the writer has shown that both Spanish and Italian children pass this test more frequently than any other one above their mental or chronological age. It is interesting to note here that Darsie also found that the American

and Northern European children excel the Japanese to a very marked degree in the '6 and 7 digits in order' test. This runs directly contrary to the common idea of people who think that because the Japanese are so imitative they must have good rote memories.

The Hawaiians, possibly because of their mixed blood, seem to have neither unusual successes or failures except that at nine years they do twice as well as all the other races in the free association test which discovers how many words a person can say in three minutes. They possibly have fewer inhibitions than the others, or it may indicate a greater mental precocity of development in the early stages of childhood parallel to their observed physical precocity*.

With regard to the tests affected by environment there do not seem to be any outstanding differences in individual tests except that the Japanese at nine years of age have great difficulty with the sentence construction, which the others do not find nearly so hard. It is rather interesting to find that in spite of the language difficulty of the Orientals, they do better on the 12 year interpretation of pictures than do the Portuguese and Hawaiians.

When the results of the Binet tests are summarized there apparently are no significant differences in intelligence quotient; the average Binet I. Q. for the four racial groups varies only three points from 84.3 of the Hawaiian to 87.3 of the Chinese.

The I. Q. table is given below:

Average Binet I. Q.'s

(From "Temperament and Race")

Nationality	Number	Average Binet I. Q.
Chinese	212	87.3
Japanese	229	84.66
Portuguese	105	84.6
Hawaiian	105	84.3

In considering this table it is important to recognize that while the average Binet I. Q.'s are considerably below 100, the average I. Q. for American children, at the same time there are no conspicuous differences between the races

*Growth of Hawaiian Girls. Isaac M. Cox. Hawaii Educational Review, Vol. 14, No. 8, p. 172; April 1926.

under consideration. We need to make some allowance for these children in comparing them with American children because of the language difficulty involved in the tests, but there need be no adjustment made for comparing the different races with each other if the American children are not included. So slight a variation of I. Q. is hardly enough to warrant the assumption of any inherent differences in intelligence of these people as measured by the Binet tests.

Maze Test Comparisons

However when we consider the results of the Porteus Maze tests applied to American, Japanese, Chinese, Portuguese, Hawaiian and Filipino children of all ages from nine to fourteen years, we find a very different situation. The Maze is not dependent upon language in any way so that the test situation does not militate against those children whose only handicap is unfamiliarity with the English language. Whatever differences we find are more likely to be inherent and unaffected by the ordinary considerations of tests dependent upon language ability. Comparing large groups of children of different races and nationalities, we find the following results:

Table of Porteus Maze I. Q.'s
(From "Temperament and Race")

Nationality	No. of Cases	Aver. Porteus Maze I. Q.
Haw'n and Pt. Haw'n....	95	100.14
Japanese	406	99.4
Anglo-Saxon	182	99.2
Filipino	156	97.67
Chinese	388	92.2
Portuguese	97	91.5

This table is extremely important from the standpoint of clinical psychology in Hawaii. We necessarily have to rely a very great deal upon performance tests in a great many problem cases. Hence it is important to know that the Portuguese average in these tests is low, and that the Hawaiian average is high.

Here is a very different situation from that of the Binet results; in a test of native ability we have a variation of 8.64 points in I. Q., almost three times as much as in the Binet tests. These differences are the more significant because in the case of all but the Hawaiians and Filipinos,

the results correspond so closely with those of the social ratings scale. The Japanese have excellent planning capacity, are a far-sighted people; the Portuguese are more volatile and heedless, and the Chinese display an unwillingness or an inability to adjust easily to a new task. They are also particularly easily confused, lacking the temperamental stability of the Japanese.

Since the part-Hawaiian group is made up almost entirely of mixed blood the results are bound to fluctuate. It is interesting to note, though, that the Hawaiians do best at nine years of age, but the curve flattens out, and the increase from twelve to fourteen years is not proportionate to the previous development, whereas the Anglo-Saxon boys and Japanese boys continue to increase their scores more proportionately. The Filipinos flatten out in the same way as the Hawaiians which suggests a plateau of development at or about puberty in this race as well*.

One very keen observer who has lived in Hawaii for some years and has had constant dealing with all the different races, and has also seen them in their native lands considers that the high score of the Filipinos in the Maze tests is not undeserved by them; but that they do have a great many excellent qualities which have been overlooked in Hawaii in these years when they are coming into the Territory in such large numbers. It will be interesting to see if time bears out this opinion that they do have the ability to adjust themselves very well to a new situation, in spite of a rather low intelligence rating by the tests which measure school trainability.

The results of the investigations reported in "Temperament and Race" have been given in a good deal of detail as they have an important bearing on our present subject. The tests used for these children referred to the Psychological Clinic were determined by this research work, and the children have been drawn chiefly from the public schools. We are fortunate in having these norms available with which we may directly compare the results of the examination of the referred cases.

*These conclusions agree with the results of investigations at present being carried on under the Rockefeller Foundation Fund.

Darsie's California Study

Darsie* has reported on the "Mental Capacity of American Born Japanese Children." He secured a thoroughly representative group of Japanese children in California, ranging from 10 to 15 years of age, making a total group of 658 city and country children. The Stanford Binet, Army Beta and Stanford Achievement Tests were applied to these children.

Comparisons of this group with Terman's** results for American children show that the Japanese have a median I. Q. ten points lower than that of the Americans.

In the Beta test, the overlapping is so great as to render differentiation unreliable after year twelve. The Japanese and American performances are practically identical for the ten and eleven year groups; while the Japanese were markedly superior at the twelve year level. Darsie considers that the Beta appears to measure two types of capacities, general intelligence and also the ability to keep at a task after the novelty has worn off. After the ten or eleven year level, it ceases to be a test of intelligence and becomes more a test of tenacity of purpose. It is at this point that the Japanese forge ahead.

The Stanford Achievement tests show the greatest retardation for the Japanese in reading, increasing from the 10th to the 13th year. They did well in the history and literature tests showing an ability to understand American ideas. The average retardation of the Japanese children was six months.

The performance of the 11, 12 and 13 year old Japanese children in separate tests of the Binet scale was analysed and compared with the performance of Terman's American children. In the nine year tests none were easier for the Japanese than Americans at any age.

In the 10 year tests, designs were passed by 84% of the 12 year old Japanese, and by 81% of the Americans. The vocabulary however was extremely difficult for the Japanese. In general the American children are best in

*The Mental Capacity of American-Born Japanese Children. By Marvin L. Darsie. Comparative Psychology Monograph Vol. III. No. 15, January 1926.

**Measurement of Intelligence. Lewis M. Terman. Houghton Mifflin, Bost.

linguistic tests but in the others the Japanese hold their own very well. Darsie believes that the Japanese are as intelligent as the Americans but are handicapped by lack of English.

The Japanese demonstrated their superiority on the induction test, enclosed boxes, code and paper cutting while the American superiority is largely limited to specifically linguistic tests.

Darsie goes on to say, "with groups or individuals having had widely different opportunity and stimuli to master the language, Binet I. Q.'s must be accepted with extreme caution as indices of innate differences in mental capacity"—a point which also has been emphasized in "Temperament and Race".

Differences in median I. Q. also were found when related to environment; for metropolitan children the median I. Q. was 99.3, for urban children 86.2 and for rural children 77.0. There seemed to be a real difference in ability in these children not explainable only by lack of opportunity.

Teachers' ratings were obtained; from these it was found that the Japanese is self confident, more emotionally stable, freer from vanity and more sensitive to approval than the American, but is inferior in intellectual capacity and command of language. There were apparently no essential differences in general social moral traits, or in school subjects such as arithmetic and spelling.

The summary of the results shows that the mean Binet I. Q. of the 10, 11, 12 and 13 year old Japanese children is 91 as against 99 for American children of the same ages. The Japanese are inferior to the Americans in mental processes involving memory and abstract thinking or concepts represented by symbols of English language. They are equal or possibly superior in mental processes involving acuity of visual perception and recall and tenacity of attention.

Tests of Southern Europeans

Another important contribution to the study of racial differences was made by Kimball Young* in "Mental Differences in Certain Immigrant Groups." He examined nearly 1,000 twelve year old children by the Army Alpha and

*"Mental Differences in Certain Immigrant Groups;" Kimball Young. University of Oregon Pub. Vol. 1, No. 11, July, 1922.

Beta tests. The racial groups included Americans, Italians, Portuguese and Spanish Mexicans. From the teachers' reports the Latins do very much poorer school work than the non-Latins, and average nearly two grades behind the American children. The psychophysical tests showed very wide differences in performance of the Americans and Latins, proving decided inferiority on the average of the Latin group. Also the Alpha tests proved a better measure of the ability of the Latin group than the Beta, showing that the alleged language handicap is not the cause of school difficulties, but that retardation is due to lack of native ability. The educational implication was that different education should be provided in recognition of these various levels of capacity in the schools. His results are given below:

**Racial Differences in Mental Tests. Young.
12 year old Children**

Racial group	No. of cases	Army Alpha score	No. of cases	Army Beta score
Americans	314	60.4	307	68.3
Italians	191	28.2	192	54
Portuguese	77	27.20	75	52.5
Spanish Mexican	51	25.90	53	52.65

Various investigators have applied the Binet tests to different racial groups, usually to compare them with white children. The Stanford Binet is commonly used for individual testing and the results are often conflicting. Terman's group of 1,000 school children with an average I.Q. of 99 by which the Stanford Binet was standardized appears sometimes too high, and sometimes too low for the average American white population. Thus Arlitt* working with Americans and Italians from about the same social grade found that the median I. Q. for the American was 92, for the Italians 85. She does note however, that while these groups had about the same environment, it does not mean that they were equally representative of their races. The Americans would be much lower in the social scale of their own group than would the Italians.

Colvin and Allen** also examined with the Binet tests 50 Italian and 50 American children; the average I. Q.

*On the Need for Caution in Establishing Race Norms. A. H. Arlitt. Jour. App. Psych. Vol. 25 No. 2, 1921. pp. 179-183.

**Mental Tests and Linguistic Ability. Stephen S. Colvin & Richard D. Allen. Jour. Ed. Psych. Vol. 14, pp. 1-20 1923.

for the Italian group was 91, for the Americans 92. These were children of the same school status, about the same range and average of chronological age and very near the same pedagogical age. Again, we would criticise these results; since these were 6th grade children there was very probably a better selection of Italian than of American children. An average I.Q. of 91 seems too high for the Italians when compared with the work of other investigators. Probably 85 is much nearer the actual situation at present with regard to these people.

Dickson, quoted by Yeung*, examined American, Italian, Portuguese and Spanish children. The median Stanford Binet I.Q. for the American group was 106, for the Italian 84, Portuguese 84, and Spanish 78.

Brown** reports a group of various nationalities among which we find 51 Italians with a median I.Q. of 77.5. He considers that this is too low for the ordinary Italian; these children came almost entirely from a mining section where the work is unusually slavish, so much so that only men of inferior intelligence would work there. There had been apparently a selection which eliminated the brighter men.

Pintner and Keller*** found 313 Italian children to have an average I.Q. of 83; while Bere (reported by Pintner****) reports 100 Italian children as having a median I.Q. of 83.

The three investigations by means of the Binet tests applied to Portuguese children indicate that they too have an I.Q. of about 85. Dickson examined 23 Portuguese, finding a median I.Q. of 84. Roll, (reported by Young) with a group of 119 cases reports a median I.Q. of 86.

Mainland Studies of Orientals

The investigations of Chinese children show very different results. Yeung found a group of 109 to have a median I.Q. of 97. These were San Francisco children whose home environment was more Chinese than American.

*Intelligence of Chinese Children in San Francisco and Vicinity. K. T. Yeung. Jour. App. Psych. Vol. 25, p.267-274. 1921.

**Intelligence as Related to Nationality. Gilbert Brown, Jour. Ed. Research Vol. 5 p.324-327. 1922.

***Intelligence Tests for Foreign Children. R. Pintner and R. Keller Jour. Ed. Psych. Vol. 13 p.214-222. 1922.

****Intelligence Testing. Rudolf Pintner Henry Holt & Co. 1923.

Porteus and Babcock place the average I.Q. for 212 Chinese at 87.3. The difference may be accounted for by a certain selection in favor of San Francisco and also that Yeung did not include any children over 13 years of age. The Chinese in San Francisco were also originally of somewhat better class than those in Hawaii.

Investigations of the Japanese in Hawaii show a similar discrepancy when compared with those of California. Darsie's 658 Japanese children had an average Binet I.Q. of 91; while Fukuda* place them as high as 97, though possibly the young children in the latter group helped to raise the average I.Q. as the Binet tests are very easy at the lower years. Porteus and Babcock found 229 Japanese boys and girls in Hawaii to have an average I.Q. of 84.66.

Sandiford and Kerr** applied the Pintner Paterson tests to 500 Chinese and Japanese children in Vancouver. By the year scale scoring method the median I.Q. for Japanese boys was 115; for girls the median I.Q. was 122.8. For Chinese boys the median I.Q. was 107.7; for Chinese girls 107. These results parallel those of Porteus and Babcock relating to Porteus Maze test scores. The Japanese apparently are superior to the Chinese in performance tests.

Summing up the results of various investigations we find several well marked tendencies. Most of the results show that the American children have an average intelligence quotient varying according to social grade between 90 and 105. The Southern European group, the Italians, Portuguese, and Spanish are considerably lower; the range of average I.Q. is from 77.5 to 91; very probably 84 would be a representative average.

The Oriental groups do not average as high as the Americans but they appear in a much more favorable light than do the Southern Europeans. The range is from 84.66 to 97. Their average, considering differences in social grade and environment, would be about 90. With these general conclusions the results of the group tests are in accord. These comparisons bear out the statement which we made in discussing immigration to Hawaii; that doubtless Hawaii was more fortunate in having immigrants from the Oriental countries than she would have been had all the laborers been drawn from Southern Europe.

*Some Data on the Intelligence of Japanese Children. Tanan Fukuda. *Am. Jour. Psych.* Vol. 34 p.599-602. 1923.

**Intelligence of Chinese and Japanese Children. R. Sandiford & R. Kerr. *Jour. Ed. Psych.* Vol. 17 p.361-367. 1926.

PART III

DISCUSSION OF BINET TESTS

Test Modifications

Before entering upon the discussion of the cases referred to the Psychological Clinic, it seems advisable to consider the tests that were used. The Vineland Revision of the Binet tests* was chosen as a basis for a mental test that would have a close correlation with school achievement and necessary adaptations of this revision have been made. The Vineland Revision was chosen in preference to the Stanford Binet because in this revision of the tests, some changes have been made so that the test is a little more difficult in the lower years, and easier in the upper years. Particularly for the children of the social grade which are constantly referred for examination, the Stanford Binet demands too much language facility even from American children.

It was found very early in the testing program that the Binet tests as used on the mainland were ill-adapted to the ordinary child in the public schools of Hawaii. The Binet tests depend too much upon language facility, the weakest feature with these children. The first adaptation that was made was designed to eliminate as far as possible those tests immediately dependent upon language; and those that required an oral response in well phrased English. Hence, all the vocabulary and the comprehension tests were discarded first, next the repetition of sentences. The trouble was that the Oriental children would not make any attempt to respond to these tests. This does not mean that they were unable to make any response to the test, but were extremely unwilling to attempt the tests unless they were quite sure of success. They evidently consider no reply at all more satisfactory from the standpoint of their self esteem than a wrong answer. This must be constantly kept in mind when Oriental children are being tested.

Oriental Attitude to Mental Tests

The differences in year VII, and similarities in years VIII and XII were also found to be practically useless.

*Condensed Guide to the Binet Tests. S. D. Porteus & H. Hill. Training School at Vineland, N. J. Pub. 19, April, 1920.

The XII year test was considered absurd by the older children, and they would not attempt any response. It is characteristic of the Oriental children, Japanese, Chinese and Korean as well, that they will not deliberately lay themselves open to possible ridicule, hence any tests whose response was not obviously indicated would not be answered at all.

The Ball and Field is another illustration of this reticent attitude. Terman considers the Ball and Field an excellent test of practical ability; and feels that it represents an actual concrete situation. He says, "Unlike a majority of the other tests, it gives the subject a chance to show how well he can meet the demands of a real, rather than an imagined, situation."*

Our own experience with this test is distinctly the reverse. The child is shown a circle with a gap; this is presumably a round field with a fence around it, and a gate (the gap) in the fence. He is told that his ball has been lost somewhere in the field, and that he is to take the pencil and draw where he would go to hunt for that ball so as to be sure not to miss it.

It is sometimes difficult for the American child who is used to the game of make-believe to accept the problem. He is somewhat used to the vagaries of the adult mind and is willing to be co-operative. Not so however with the oriental child in Hawaii. He views the examiner with some surprise and waits. This is some improbable nonsense so he does not even trouble to pick up the pencil. It is extremely discouraging when trying to apply the test, to have to persuade the child to pick up the pencil, then to start at the opening, and finally to urge upon him the necessity of making some kind of mark on that field. The Ball and Field test was finally discarded; its only value for diagnosis was as a test of the examiner's patience.

Language Factor in Testing

In general, those tests which correspond fairly closely to the school situation obtain a ready response, and there is no special difficulty about the rote memory tests, or in fact any of the tests which do not require an oral response except the Ball and Field. But the language tests make up so large a portion of the Binet scale, that when they were

*Measurement of Intelligence p. 212.

discarded we were compelled to shorten the scale, using four tests instead of six for each year, and also to change the scoring, allowing three months credit for each test up to the twelve year level. In years twelve, fourteen, and sixteen four tests also are used with six months credit for each. The final selection of tests is given in Table III.*

There are of course a great many language tests still remaining in this shortened form of the Binet. We use definitions instead of the Ball and Field in year VIII, even though it is supposed to be the purest form of language test. The reason for this is that it approaches the school situation so closely that the children do not find it unnatural. There are several distinct advantages in the selection of these tests. Three important series are retained, memory for digits in order, memory for digits backwards, and description of pictures. The pictures and rote memory tests hold no terrors for the children; they are excellent tests for a beginning and make it easy to place a tentative basal year. The diamond and writing from dictation also help to establish rapport with our rather silent subjects. If we follow these tests with the coins, counting backwards, number and weights tests in year 9 the child is by this time emotionally adapted to the test situation and it is then possible to give those tests which require some language response.

Another characteristic of the Oriental children which does not seem equally attributable to the Caucasian is that a wrong response is felt very keenly and makes them extremely hesitant in attempting another. So a general rule in testing these children is to start with tasks somewhat below their mental level in order to give them a certain sense of confidence to bridge over the first few minutes.

At the same time while the abbreviation of the tests was necessary, the scale as we use it has some inevitable defects. By retaining the questions which are dependent upon school experience, the child with previous educational training will be given an advantage over the comparatively unschooled child. More serious than this, perhaps, is the emphasis that the abbreviated scale puts on rote memory. This is due to the retention of the easily applied tests of repeating digits forwards and backwards, the reading and report, and the memory for designs. This would not be so serious if there were some counterbalance by the in-

*See also Temperament and Race Chapter XV.

clusion of tests of practical ability but these are wanting in the scale, especially in the upper years. In the fourteen year group the child is asked for three differences between a president and a king, and is also given an arithmetic test, both of which reflect school experience. Hence it is very difficult for children without excellent school ability to score much above the 10 or 12 year level; and there is an artificial lowering of the I.Q.s of the older children. It is obvious that one of the great needs of clinical psychology in Hawaii is the provision of supplementary performance or practical ability tests at the upper age levels.

PART IV

THE PORTEUS MAZE TESTS

What the Tests Measure

As we have already seen, while the Binet tests are invaluable for the purpose of diagnosis of individual cases, at the same time we cannot blind ourselves to the fact that they do not tell the whole story. Since there is no way of knowing in which cases the Binet is the truest index to the intelligence of the person we must in all problem cases use some other test, preferably a performance test, to aid in the diagnosis. The chief objection to the ordinary tests employed is that they have been so standardized as to have a very high correlation with the Binet tests. This is rather a fault than a virtue, for it indicates that these tests are examining substantially the same mental capacities as does the Binet. What is usually needed in clinical examination is a test which will enable us to evaluate some of the qualities of temperament or intelligence not adequately shown up by a Binet examination.

The Binet and tests of its type* such as the Army Alpha and the various group tests enable us to measure rather accurately the school proficiency of the individual. As supplementary proof of this we have the school record. What we have not learned from a Binet test is the amount of industrial trainability the child possesses or whether he possesses the normal amount of persistence and determination, planning capacity and prudence necessary to social adjustment. As an index of these traits the Porteus Maze tests seems to be the most suitable for application here.

It is undoubtedly a very difficult task to assess these capacities in the individual—far more difficult than to test his rote memory, his vocabulary, or his skill in arithmetic. It should be recognized that to test the former qualities at a high level is well nigh impossible; for example we cannot measure planning capacity except at very simple levels.

*Among the tests which are of the same general nature as the Stanford Binet might be mentioned the various modifications of the original scale such as the Goddard, Herring, Kuhlmann, & Burt's Revisions, the Yerkes-Bridges Point Scale and among the group tests the National Intelligence, Haggerty, Otis etc.

As regards the Porteus Maze test it is not contended that it examines the planning capacity which is needed in building a bridge or even managing a business. The basic assumption is however that if a person does not possess the planning ability and prudence necessary to find his way through a pencil maze he is very unlikely to show it in the vastly more complex situations of every day life. Hence the tests have a negative value in so far as failure is more significant than success. It is unfortunate but true that as yet we have no adequate tests of these important capacities, but the Porteus Maze tests are among the best tests available in this field.

Limitations of the Tests

It is worth while reiterating for the benefit of those who have criticised the tests without understanding their purpose that they are intended not as a substitute but as a supplement to the Binet; that they are not primarily general intelligence tests although general intelligence is an important factor in their successful performance; that they are not suited to the grading of ordinary adult personalities but rather to the immature or underdeveloped; that they are not all-sufficient for the detecting of all cases of mental abnormality or psychopathy and that in the rare cases even the defective may slip through the mesh; that although they appear easy to administer they are extremely difficult to interpret qualitatively so that the untrained examiner may miss their greatest value; and finally that they are not suited for re-application to the same children because of the practice effects. Another feature is that their standard deviation is high, which to a narrow statistical view may seem a defect, but which merely proves that ability of the kind measured by the tests is a variable human characteristic, more so than so-called general intelligence.

Over against these admitted objections it may be said that most of these things are true of other performance tests but most important of all is the fact that they represent practically the only tests of the temperamental traits of prudence and tendency to use foresight, capacities whose importance for every day adjustment would be difficult to exaggerate.

Bearing all of these considerations in mind it is advisable to determine the present status of the Porteus Maze tests not only as regards their usefulness as tests in Hawaii but also as regards their place in clinical psychological

methods everywhere. For this purpose a brief summary of the literature bearing on the subject will be useful.

Description and Standardization

The tests have now been in use for about fourteen years. They were rather roughly standardized in 1913 by application to groups of defectives and normal school children,* and their results reported at a meeting of the British Association for the advancement of Science in August 1914. For further standardization purposes they were applied to 1,000 Australian school children ranging in age from 5 to 14 years. In this early revision the average difference between the Maze and the Binet tests amounted to about one third of a year of mental age.

Several changes in the form of the tests and scoring have been made since that time. In 1918, the tests were modified and applied to 1925 State School children in two large groups of widely separated social status*. In 1919** and again in 1923*** some changes were made so that now the possible range of scores is from three to sixteen years, which makes it possible for children 14 years of age to obtain an I.Q. of over 100 if they make a perfect score. It should be noted that 14 years is accepted as average adult level and in both the Binet and the Maze tests the I.Q.s of children over 14 years of age are calculated on that basis.

The tests consist of a series of printed mazes standardized for ages 3 to 14. One of the chief advantages of the test is that it consists of homogeneous material, and once the idea of the test is grasped, further directions are unnecessary. The tests for the lower years are very simple, requiring the young subject only to draw around the form of a diamond and a maltese cross without crossing the line. The tests then increase in difficulty up to the 14 year level. It is important to note that the practice effect of the tests is very great, in fact the scoring of the tests is

*Motor Intellectual Tests for Mental Defectives. S. D. Porteus Journal Ex. Ped. Vol. 2 No. 2, 1915.

*Intelligence and Social Valuation. R. J. A. Berry & S. D. Porteus. Training School at Vineland Pub. 20 May, 1920.

**Porteus Tests—Vineland Revision. S. D. Porteus. Training School at Vineland Pub. 16, Sept., 1919.

***Guide to the Porteus Maze Tests. S. D. Porteus. Training School at Vineland Pub. 25, March, 1924.

based on that principle. In applying the Maze tests, we endeavor to discover how the individual adapts himself first to a totally new situation, and then to constant slight changes in the situation. It is necessary to know first of all whether the subject really has the simple kind of planning capacity needed in the test, but more important still whether he has formed the habit of using what planning capacity he possesses. The claim that the Porteus Mazes are tests of certain temperamental traits is based on the fact that impulsive, ill-considered, careless or heedless action will inevitably lead to mistakes in the test. We also desire to know whether he is suggestible, and easily enticed by what appears to be a proper opening, whether he is irresolute, so that he fails to carry out the best plans, whether he is over-inhibited, or whether he tends to lose his head when he makes an error. These are a few of the characteristics that may be gathered from a qualitative analysis of the response to the Maze tests.

Results of Application

The author of the tests has chosen to make a thorough investigation of the merits of the Maze test rather than to incorporate it into a series of other performance tests whose interpretation is doubtful. It is far better to use one supplementary test whose meaning and interpretation are reasonably clear than to use a scale of several tests for which, valuable as they may be, there is only difficult interpretation. Hence we have a good many studies undertaken primarily for the purpose of determining exactly what the tests measure, and what a Maze test age means in relation to the other factors in the situation.

We may summarize some of the results here. The first significant point is that numerous studies* have shown that the average correlation between the Porteus Maze and the Binet is about the order of .60, varying slightly according to the age and intelligence of the group. If the subjects are very young, or if low grade feeble-minded are included in the group the correlation is naturally higher. There is a very close correlation between the two tests to about a seven year mental level. However, as soon as the Binet test age goes very much over 7 years, fluctuations begin to appear in the Maze. Herein lies the value of the test. It

*Studies in Mental Deviations. S. D. Porteus, Training School at Vineland. Pub. 24, Oct., 1922.

is very easy to differentiate the low grade feebleminded cases, whose mental level is below 7 years; but it takes a wider choice of tests as well as a great deal more experience and skill to make a proper diagnosis as soon as the individual is found to be above the imbecile groups.

There are at present norms available for various racial groups, Anglo-Saxons, both in America and Australia,* Portuguese, Hawaiian, Chinese, Japanese, Filipino and Australian aboriginals.* They have been used too in studying abnormal groups of children, feebleminded, deaf and dumb, and delinquents. The Maze tests are as applicable to foreign and deaf children as to American children because there is no language necessary in applying the test.

To determine the relation of the test score to social fitness, many studies have been made. Those made by the author or under his direction have recently been reported in the "Guide to the Porteus Maze Test." For boys, the average correlation of the Porteus Maze with social capacity, that is the ability to get along in society, was for all the studies reported .68. The average correlation of the Binet with the social ratings was .64. In four other studies with girls, the average correlation of the Maze with social adaptability was .76, of the Binet .69. So as a measure of social adaptability at or about moron levels, the Porteus Maze is superior to the Binet and somewhat more valuable for girls than for boys.

Irrelevant Criticism

In all the work that has been done with the Maze tests, only three investigators have reported unfavorable results. The first was by Whipple* in "Classes for Gifted Children." He was endeavoring to discover what mental tests were most valuable in selecting from ordinary public school children bright pupils for training in special classes for gifted children. He reported the results of 14 individual and 11 group tests applied to two groups of children; a group of thirty who were picked for superior 5th and 6th grades and a control group of 119 5th and 6th graders in the same

*Measurement of Intelligence: 653 Children Examined by the Binet & Porteus Tests. S. D. Porteus. Jour. Ed. Psych. Jan., 1918.

**Mental Tests with Delinquents & Australian Aboriginal Children. S. D. Porteus. Psych. Rev. Vol. XXIV No. 1, 1917.

*Classes for Gifted Children. Guy M. Whipple. Public School Pub. Co.

school. The Porteus Maze test was applied to the 31 children, and to 10 of the control group. Whipple reports that the Maze was wholly unsatisfactory because it failed to differentiate the special group from the 10 pupils of the control group, and also did not check up with the mental ages previously determined by the Binet.

It would indeed have been surprising if the Maze had differentiated the thirty from the other ten, especially when they were selected upon the basis of school achievement which the Maze has never been intended to measure. The qualities that make for school brightness are in many cases not identical with those that contribute to social success: If the tests are, as is claimed, in any degree tests of temperamental traits then it would be an untenable assumption that they would parallel the intellectual traits in their development.

Whipple's results with the Maze are mentioned by Prof. Alexander Mackie* in "The Study of Education." He states that among others, the Porteus Maze tests were applied in a study made by Phillips in Australia and from the data so secured the reliability of the tests has been calculated. The reliability of the Porteus Maze was given as .29 and Mackie goes on to state, "Unless a reliability of about .60 is secured, no test is worth using in its present form. Hence the Porteus Maze and the Healy Test (.26) are not sufficiently reliable. It is interesting to note that Whipple also has found the Porteus Test unreliable."

While Mackie does not show how his data on reliability were obtained, his results are not at all in agreement with those of later investigators; hence we would presume that he determined the reliability of the tests by repeated application to the same children. The practice effects are so great and so varied in different children that the so-called reliability of the tests when calculated in this way is irrelevant.

Application to Psychopathic Cases

In "A Comparison of Stanford and Porteus Tests in Several Types of Social Inadequacy" by Ethel Cornell and

*Study of Education. Alex. Mackie Rpt. 15th meeting Australasian Ass'n for Advancement of Science Ed. Section Jan., 1921.

Gladys Lowden* the authors state that the Maze tests are too limited in range of ability to be of greatest use with adults other than the mentally defective, and that the differences in individual performances are scarcely distinct or consistent enough to be of more than the slightest value in diagnosis. The work was done with 350 persons who passed through the Boston Psychopathic Hospital during the year 1919-20. 174 of these were included in the report; 50 cases of dementia praecox, 50 of mental deficiency, 50 of constitutional psychopathic inferiority, and 24 diagnosed as not insane, not feeble-minded. The last group includes cases sent to the Hospital because of peculiar conduct, domestic difficulties etc, but were judged to be not insane, mentally defective or psychopathic.

All the cases are to some degree failing of adequate social adjustment else they would not be passing through a psychopathic hospital, but only a few of the cases had previously been in an institution for either the insane or feeble-minded. They were practically all adults, none under 14 and only 13 under 16 years of age. Their results were as follows:

Binet and Maze Test Ages of Cases of Boston Psychopathic Hospital.

Not Psychotic	14.08 yrs.	12.25 yrs.
Constitutional Psychopathic		
Inferior	13.25	12.25
Dementia Praecox	11.29	11.25
Feeble-minded	10.21	11.0

We would consider from the same results that the Maze test was least useful in the case of the supposedly feeble-minded group. In all of the other groups which were admittedly failing to make proper adjustments the Maze was lower than the Binet, but the authors apparently do not consider this fact important. They also feel that from the qualitative side more may be obtained from the Stanford Binet than from the Maze. The present writer would not agree on this point but the ability to obtain qualitative results depends very largely upon the examiner's experience with the tests.

*A Comparison of the Stanford & Porteus Maze Tests in Several Types of Social Inadequacy. Ethel Cornell & Gladys Lowden. Jour. Abnormal & Social Psych. April-June Vol. XVIII No. 1 p. 33-42.

Porteus* discusses this article in a later number of the *Journal of Abnormal and Social Psychology*. He points out that the claims for the Maze have been not that they detect the "mentally unstable" but that they detect the "mentally unstable defective" or better the "temperamentally inadequate defective." He also remarks that he would as soon expect the maze test to apply to all criminal types as he would to find it of universal application to all cases of mental instability.

The Porteus Maze does differentiate those defectives who are impulsive, easily confused types with poor planning capacity, but the constitutional psychopathic inferior may have all or none of these particular qualities. Furthermore there are psychopathic individuals who have a tendency to do extremely well in a short well supervised task such as the Maze tests but who cannot continue at this high level of performance for long periods.

Mateer* in "The Unstable Child" reports of the tests that "The Porteus Maze tests are another encouraging addition to this group of tests involving actual activity. One need not however, evaluate them as highly and as all sufficiently as their inventor does." In spite of this however, she quotes the Maze test scores about 20 times in this book and in each instance the results are entirely in line with her individual diagnosis. On page 292 she says that the Maze was given to 41 of the group of children with a 9 to 9-11 Binet. The Maze average was 9 years 7 months with a range from 5 to 13½ years, and a mean variation of 15. She found that the Maze results coincided with the Stanford mental age more closely than any of the other performance test ratings. This group of 9 to 9-11 Binet level did poorer work for their Binet level than did the 8 year group. She goes on to say, "Undoubtedly this means that the Porteus reveals some other capacity than one which we should assume an individual has by virtue of his mental age and chronological development. These children average a year highly mentally and are 1 year 8 months older in average chronological age than the 8 year mentalities, yet they score an average rating only five months higher, and the modality is lowered."

*Porteus Tests and Social Inadequacy. S. D. Porteus. *Jour. Abn. & Social Psych.* Vol. XVIII No. 4 Jan.-March, 1924.

*The Unstable Child. Florence Mateer D. Appleton & Co. N. Y.

Morgenthau's Study

Three comparative studies of performance tests including the Maze have been reported. The first is Morgenthau*, "Some Well-Known Mental Tests Evaluated and Compared." Her study was designed to obtain comparative results of reliable mental tests on normal children; hence mental defectives were excluded.

She weeded out all the tests which were "unreliable" that is, which gave different scores from day to day and in which the variation was all the way from good to poor performance. The tests finally selected were these:

Stanford Binet
Pintner Mental Survey, Non-Language Group Test
Healy Pictorial Completion Test B
Porteus Maze
Tapping Test Healy's Form
Healy's Construction A and B
Crossline Tests
Healy and Bronner Learning
Myers Mental Measure

Each test was evaluated in two ways, its self correlation and its correlation with other tests. Teachers' judgments were obtained as outside criteria but found so wholly unreliable that they were discarded.

If the various tests intercorrelate extremely highly they are probably measuring the same thing; if the inter-correlations approach zero or are negative we have no evidence that intelligence is being measured at all.

The Porteus Maze when correlated with itself gave a correlation of .95 which was high and satisfactory; with the Stanford Binet the correlation was .536 which was sufficiently high to show that different abilities in the subjects were being measured. The inter-correlations of the tests showed the Maze and Alpha 2 to have a correlation of .701; Maze and Pictorial II .702; Maze and Myers .33; Maze and Pintner .356. Since the Maze is a non-language test it would be expected to correlate more highly with Pintner and Myers than with the Stanford Binet and Alpha II, but such is not the case.

*Some Well-Known Tests Evaluated and Compared. Dorothy R. Morgenthau. Archives of Psychology No. 52 New York City. May, 1922.

Apparently good judgment, common sense ability, planfulness, deliberation, carefulness, foresight and good apperception are being measured to some extent by Alpha II, Pictorial Completion II and the Maze.

The author concluded that the type of material does not govern the abilities tested. The reliability of the Stanford Binet, Pintner non-Language Test, Thorndike Reading Scale Alpha 2, Porteus Maze, and Tapping Test were established. The Myers Mental measure, Healy Pictorial Completion Test II, Healy Bronner Learning and the Crossline tests are not definitely shown to be reliable.

Relation to other Performance Tests

Frances Gaw* studied fourteen performance tests by comparing them with each other and with other tests by means of observations and introspections given by psychologists, and by the consideration of the effect of environment on scores. For the latter purpose a group of canal boat children was given the performance tests.

For boys, the inter-correlations of the Maze and other performance tests, i. e. several from the Pintner Paterson and several from the Army Beta were low; the three highest being Stanford Binet I.Q.s .52; Performance I.Q.s .25; Goddard Form Board .18. For girls, the inter-correlations were .42 with the Cube Imitation; .48 with the Performance I.Q.s while with the Binet, it was only .29.

By introspection of seven psychologists who took the tests, the Maze is included among the tests involving principally reasoning. Temperamental qualities were measured directly only in the Kelly Test and in the Porteus Test.

The conclusions indicate that the Maze is included among the tests which measure general intelligence as measured by the Binet scale; but that to use only one performance test such as the Porteus Maze alone can only lead to very precarious results.

In 1926 Worthington* analyzed 11 performance tests to determine whether these tests contribute any additional information to the general intelligence rating measured by the Binet scale, and to determine the best substitutes to be

*A Study of Performance Tests. Frances Gaw. Brit. Jour. Psych. General Sect. Vol. XV Part 4 pp. 374-392, April, 1925.

*Study of Some Commonly Used Performance Tests. Myrtle R. Worthington Jour. App. Psych. Vol. 10, No. 2, June, 1926.

when the Stanford Binet or other intelligence tests cannot be applied. The subjects were 539 unselected cases examined at the Institute for Juvenile Research, children referred because of mental defect or behavior difficulties.

The Porteus Maze with 118 cases had a correlation with the Stanford of .75 p.e. .03; with 50 cases the correlation was .59 p.e. .03.

The Porteus Maze was one of the four tests which showed a 'high' correlation with the Stanford scale. These are the tests which showed a regular distribution with no disproportionate number of cases making unusually high scores on the test.

The author concluded that the "Pintner-Toops Directions Test, Seguin Form-Board, the Porteus Maze and the Trabue Completion Test gave high correlations with the Stanford Binet, and had normal distribution curves, and therefore may be considered a partial substitute for the Stanford Binet mental age."

Graham* applied the Porteus Maze among tests to a group of unselected Italian and Jewish children. She found that with Italian children the Maze does not measure the same thing at all as the Binet (when the age is constant); and that it does measure a chronologically developing ability that is distinct from that measured by the Stanford Binet, and does so better than either the Cube Imitation or Healy Completion II. She thought that it seemed fair to conclude that the non-language tests were fair tests of general intelligence; and also that the Italians were consistently worse than the Jews and Americans.

Other References

Two interesting case histories of boys at Letchworth Village (for mental defectives) have been reported. One had a phenomenal memory**, the other was a pianist*** of marked ability. The boy with the remarkable memory had

*Intelligence of Italian & Jewish Children in the Habit Clinics of Mass. Division of Mental Hygiene. Virginia T. Graham. Jour. Abn & Soc. Psych. Vol. 20, No. 4, Jan., 1926.

**Phenomenal Memory in its Bearing upon Various Mental Tests. Frances E. Otis. Jour. App. Psych. Vol. 9, p.3---318, Sept., 1925.

***A Case of Secondary Mental Deficiency with Musical Talent. Blanche Minogue. Jour. App. Psych. Vol. 7, No. 4 p.349-352. December, 1923.

a Stanford Binet test age of 12 years 11 months, I.Q. 81; his Porteus Maze test age was 5½ years. He was socially inadequate, of very little value in the institution, and will always be a custodial case. The boy with musical ability had a Stanford Binet test age of 7 years 5 months, I.Q. 62; his Porteus Maze test age was 5 years. He was excitable, egocentric, usually cheerful and obedient, but very sensitive and wholly incapable of a social existence. It is cases like these which lead us to reiterate that failure in the Maze tests is very important, much more so than success. None of the tests are so difficult but that a person of extremely limited intelligence could work them out. Since they are capable of being worked out, anyone who fails to do so must have temperamental weaknesses such as impulsiveness, or suggestibility which are bound to seriously effect his social adjustments.

Ballard* in his "Mental Tests" does not report any results of work with the Maze but in discussing tests of practical ability he says, "The Test that seems to give the best evaluation of the factors which make up practical ability is the Maze test.....The correlation coefficients show that the Porteus tests while yielding as a whole the same type of developmental curve as Binet's, differ widely from them in the estimates they afford of certain individuals who are mentally unstable and are temperamentally unfit to make their way in the world."

Burt** in his "Mental and Scholastic Tests" reprinted and discussed the Maze Tests in detail (pp. 242-256). He goes on to say that the peculiar value of the tests lies in the fact that they are non-linguistic, and supplement, though not supplant, the other scales in a profitable way. "It is perhaps in estimating social as distinguished from educational efficiency that they will be found most helpful.

Kubo*** modified the Binet tests to measure the intelligence of the elementary school children of Tokyo. His revision will include three of the Porteus Maze tests; the

*Mental Tests. Philip B. Ballard. Hodder & Stoughton, Ltd. London, 1920.

**Mental and Scholastic Tests. Cyril Burt, London County Council, 1921.

***The Revised and Extended Binet Simon Tests Applied to Japanese Children. Y. Kubo. Ped. Sem., 1922. Vol. XXIX p. 187-194.

four, six and eight year tests, though in Kubo's scale the six year maze will be placed at the 5 year level, and the 8 year test at the six year level.

Baldwin and Stecher* also used three of the Maze tests in their work with the pre-school child. They found that the designs are useful in differentiating children above and below three years, and furnish much incidental material for judging the child's motor development.

In discussing the Maze tests in "Intelligence Testing" Pintner** mentions its advantages; it requires a single type of performance for all ages, is a real age scale; it is short, easy to give and interesting to the children. It is also suitable for the testing of non-English speaking and deaf children, as no language responses are required. Its chief limitation as a general intelligence scale is that it tests only one type of behavior. Pintner also states in his discussion of the Pintner Paterson performance scale, that the only other scale that can be legitimately used with deaf children is the Porteus Maze.

Use in Mental Testing Clinics

Gesell,** also has incorporated the 5 year Maze in his tests for the pre-school child. He uses the tests chiefly as a basis for displaying and recording personality reactions.

Grace Arthur*** is standardizing a new point performance scale. She found first the discriminative value of various tests; that is, the capacity for bringing out individual differences in intelligence. The discriminative value is low when scores of children of one age group largely overlap those of an adjacent age group; high when there is little over-lapping. On the basis of 343 Clinic cases, the Porteus Maze ranks third in discriminative value, the Kohs Block Design and Sylvester's Norms for the Goddard Form Board taking first and second place.

"The scale first included some of the Pintner Paterson tests, the Knox cube, Seguin Form Board and Kohs Block

*Psychology of the Pre-School Child. Bird T. Baldwin & Lorle Stecher D. Appleton & Co., New York, 1924.

**Mental Growth of the Pre-School Child. Arnold Gesell Macmillan Co., New York, 1925.

***A New Point Performance Scale. Grace Arthur. Jour. App. Psych., Vol. 9, pp. 390-416, Dec., 1925.

Design. It is to be standardized as a whole, and the "Porteus Maze test will be included, and should increase the value of the scale."

A survey of psychological clinics in New York State was made by Eleanor Boyakin* with regard to the tests used. Thirty-nine of the forty clinics presenting results were using the Stanford Binet tests; the Porteus Maze was next in order with 17 clinics using it. Sixteen were using the Pintner Paterson but no other tests were reported as being used in more than ten of the forty clinics.

From the results presented here we see that the Porteus Maze test has recognized merit, and that it is widely used as a supplement to the Binet scale. Also we find that investigators other than its author have found that it does measure temperamental traits to a certain extent. It has high discriminative value and correlates well enough with the Binet so that we know that it is measuring some of the same aspects of intelligence but the differences are such that we know that it is approaching the matter of intelligence from a different angle from the Binet tests. Since it is applicable to all ages of children and has no language bar, and since its validity for the measurement of temperamental differences has been proved by the work of several investigators, we may proceed with confidence to review the results of the application of this test to our clinical problems in Hawaii.

*A Survey of the Field of Clinical Psychology in New York State. Eleanor Boyakin. Jour. Ed. Psych., Sept., 1926. Vol. 27, pp. 402-407.

PART V

THE RESULTS

Applications of Tests in Hawaii

In the introduction the attempt has been made to explain the social situation in Hawaii, to show what is the nature of the problem presented to the clinical psychologist and why a valid diagnosis is very difficult to make. Also there have been presented the advantages and defects of our adaptation of the Binet tests, and of the Porteus Maze which are the mainstays of our clinical procedure. This next part will consider the results of the examination of cases referred to the Psychological Clinic between September 1924 and January, 1927. The tests have all been applied by the writer who has had sufficient experience and practice with the children of Hawaii to guarantee that the procedure has not varied and that the earlier children examined were not discriminated against because of the examiner's lack of understanding of their peculiarities.

In the consideration of the Binet and Maze test scores, we have included no children who did not themselves present a problem either of behavior or of retardation. If this had not been done, there would have been a very artificial selection in favor of the Caucasian group, as a number of young very bright children have been brought for examination to see what their capacities were as measured by the tests. There were also not included a few children of various nationalities referred by the public schools to determine the advisability of special promotion; there was also the group of children of families receiving pensions. These children of pensioned families were not problems themselves; their dependency was due to force of circumstances which they were naturally unable to control. Because they are an interesting group, however, they will be considered separately from the others.

After these special children were eliminated there remained 760 cases of various nationalities and ranging in age from three to thirty-five years. The retardation cases were referred in largest numbers from the public schools; behavior problems and the definitely feeble-minded children were usually referred by the social agencies in Honolulu,

the Juvenile Court, Girls' Industrial School, Social Service Bureau, and other similar organizations.

School Grade and Age

Reference to Table IV shows the school grade and age of all the referred cases. It will be noted that of the whole group only one child, a 5½ year old Caucasian boy, is advanced in school for his age. This child had been placed in the first grade at school before he was six years old, and had shown marked nervousness and timidity, and so little ability to adapt himself to the school situation that he was brought to the Clinic for examination.

It will be seen that there are some children of school age who were not attending. Most of these were so dull that either they had not started at school or had been excluded after a short school experience. Some were physically defective and could not attend for that reason.

It will be noted that the number of cases referred drops off abruptly above the sixth grade. The majority of cases referred above the sixth grade and still in school were behavior problems, and most of them were boys who had been stealing or were beyond parental control. There should be of course no retardation problems above the sixth grades; the compulsory law does not apply to children over 14 years of age, so that these children can drop out as the work becomes too difficult for them.

Of the 577 children examined who were actually attending the public schools, 103 or 18% are of average age for their grade; 71 more, 12%, are retarded one year, while the remaining 70% are retarded from two to seven years.

Racial Comparisons

For comparative purposes, these 760 cases were then divided into eleven nationality groups*, Korean, Chinese, Japanese, Filipino, Porto Rican, Hawaiian and part-Hawaiian, Spanish, Portuguese, Other Caucasians, Portuguese with Other Caucasian Mixtures, and finally a group that can only be described as Other Mixtures. This latter group had several crosses of Oriental, Porto Rican and Caucasian blood and in some instances there were four racial groups

*Nationality is used thruout this discussion to denote parental ancestry. The great majority of these children were born in Hawaii and hence are American citizens.

intermingled, Oriental, Filipino, Porto Rican and Caucasian. The largest groups were the Hawaiian and Part-Hawaiian with 239 cases; the Portuguese with 164 cases; Japanese, 136 cases, and the Chinese, 75 cases. The other groups were much smaller but it seemed worth while to consider them separately in spite of the small numbers.

The first thing to be determined was whether or not the children of the different nationalities were being referred for examination in numbers proportionate to their population. To do this, the number of children of each nationality group in the Honolulu Public Schools was taken as a proper figure to represent the population; and the percentage of referred cases was calculated according to the corresponding number of children of school age (from 6 to 15 years) who had been referred for examination. If the total adult population had been used as a basis for these calculations, the figures would have been unreliable. The Filipinos, for instance, now make up a very large bulk of the general population, but since they have come so recently there are, at the present time, very few Filipino children in the Honolulu Schools. A further analysis was then made to show the number of behavior problems in each group, and also to show their school progress. (See Table V.)

Porto Rican Group

The Porto Ricans represent by far the most serious situation from a clinical standpoint. 107.53 for every thousand in the schools were referred for examination. They apparently, of all the groups, find adjustment to the demands of school life and society most difficult. It is encouraging to find, however, (from Table V) that school retardation rather than specific behavior difficulties is the most frequent cause of their maladjustment. We can meet the problems of school retardation, if mental dullness is the principal factor, by establishing special classes and opportunity schools; but controlling anti-social conduct in dull children in addition to providing special instruction for them makes the burden too heavy. As a matter of fact, only 15% (6) of these cases were referred on account of behavior; three of these were not in school and three had been sent to Waimano Home.

Turning to Table VI, we find that the average Binet I.Q. for the Porto Ricans is 64.4, lower than any other group. The Porteus Maze I.Q. is 69.98, also lower than

the average of any other group. From these facts we would infer then that the Porto Ricans are an extremely serious social liability, not so much because of anti-social tendencies as that they are of extremely low mental level, and lack the intelligence to make the necessary adjustments particularly in Honolulu.

These low test scores also lead us to another consideration. The Porto Ricans referred to the Clinic probably are in the same relation to the general Porto Rican population as are any other racial groups. Generally speaking, the Japanese or Chinese cases referred to the Clinic average about 15 I.Q. points lower than the normal Japanese or Chinese population. If this be true of the Porto Rican as well then the average Binet I.Q. of Porto Ricans would be about 79. If they scored well in the Maze test, we would consider that they had possibilities of making some adjustments industrially even if not in school. Unfortunately the Maze scores are almost as low as the Binet, a poor augury for the future adjustments of these children.

Portuguese Group

The group which is second in point of frequency proportionately to their numbers in school is the Portuguese, which had 78.95 cases referred for every thousand of the school population. Since it is customary in the public school records to consider the children of Portuguese married to other Europeans as Portuguese, it was necessary to combine the two groups to determine their relative frequency. We find in the pure Portuguese an interesting situation. School retardation seems to be far the most frequent cause of their examination. Of the 164 cases of pure Portuguese, only 21% were behavior cases. 41% however were in the Opportunity School and another 28% were below the fifth grade in school. The average Binet I.Q. of this group is 71.22, the average Maze I.Q. 73.5. Apparently these children, like the Porto Ricans, are not temperamentally stable. They too are dull, and add to that dullness impulsiveness and lack of planning capacity which carry their best intentions astray. The Portuguese also apparently find the requirements of the regular grades singularly ill-adapted to their learning capacity. We realize this when we see that of the 175 children examined at the Opportunity School 39% of them were Portuguese.

We would expect, on account of the poor Maze scores,

a rather large number of behavior problems. Examination of the records show however that the Portuguese had only 21% of their total number referred for specific offenses. It would appear that these people are on the whole impulsive and careless in the majority of their every day reactions, as is borne out by the extremely poor school records. There are however not so many serious offenses against social regulations.

The mixtures of the Portuguese with other Caucasians present a different picture. The median chronological age is only 10.2 which means that their difficulties begin at an early age. Here the behavior problems represent 48% of the number of cases referred. Their average Binet I.Q. is 71.09, about the same as for the pure Portuguese, but their Porteus Maze I.Q. is very much higher, 81.5. There is a very wide variation in the Maze scores however, and since the group is smaller, probably the median Maze I.Q. is more valid. This is 74.5, which corresponds rather closely to the average Binet I.Q. It appears that so far as a low test score is concerned, the Portuguese-Other Caucasian mixtures resemble the pure Portuguese very closely, but there are considerably more behavior cases in the mixed bloods than the pure Portuguese.

Filipino Group

The Filipino group which comes third is actually small, only 26 cases; but when the total number of Filipinos in the Honolulu schools is considered, their proportion is high, being 67.99 for every 1,000 in the school population. The majority of Filipino children are still in the regular grades, from the first to the fourth. There were 6 (23%) above the fourth grade, and the same number in the Opportunity School, but there is a very small number of them at Waimano Home. The average Binet I.Q. is 70.65, the average Maze I.Q. 83.09, with the medians of both closely resembling the averages. An analysis of the test scores gives a very favorable impression of this group; they are rather dull, but have good temperamental qualities. The number of behavior problems is not extraordinary; 27% is somewhat higher than the average for the entire group (23%) but is within the range or normal variation. Judging only from the test results, we would expect that the Filipinos would make very good plantation laborers—they are dull and slow at academic tasks, but have certain traits of prud-

ence and planning capacity which should be very valuable in industry.

Up to the present time, the experience of the planters has not accorded with this view. They have regarded the Filipino as lazy, inefficient, with very little forethought. One of the evidences of their lack of ordinary foresight is that they prefer to be paid weekly, and that extra pay for overtime is little or no inducement for them to remain in the fields after two or three o'clock in the afternoon. The Japanese, on the other hand, would work very much longer, and would consider it time well spent. It must be remembered that the Filipinos are the newest arrivals, and that they are having to make a very wide-spread adjustment to new conditions. The early laborers had very few temptations to any excitement at all. They were extremely restricted; the roads between plantations were not good, means of transportation were scanty, and the laborers were comparatively isolated. The Filipinos have come to Hawaii in a different era. Wages are high, living conditions very much better than ever before, there is ready communication on good roads between the different camps, and conditions are such that it is quite possible for the laborers to own a car at least on a partnership basis.

What, then is the use of working all afternoon when to stop would mean a ride in the car and a trip to the movies? It would seem that part at least of the feeling against the Filipinos has arisen because of a misunderstanding of their psychology. They are not lazy, but are like the Hawaiians, in that they will work extremely hard for a time, and then stop. The Japanese does not tend to work as hard, but does work much more steadily. It is very likely that the comparison between the Japanese and Filipino methods of attacking their work has reacted unfavorably on the Filipinos. It is interesting to note however that there is growing among the plantation managers a much more favorable attitude toward the Filipinos. Their work is becoming more diversified throughout the islands and the managers are beginning to find that when certain adjustments in plantation regulations are made, such as paying the men off every week, not requiring overtime work, and offering a turn-out bonus for the men who work a certain number of days a month, and in other ways taking the psychology of the Filipinos into account they are much more satisfactory as plantation laborers.

We must remember that standards of value differ and for certain temperaments no amount of money could possibly compensate for the loss of freedom. The Filipino will not sacrifice his immediate good for future gain; he vastly prefers to have the balance of work and play evenly maintained. This has been taken to indicate a lack of foresight and planning on the part of the Filipino but need not necessarily be thus interpreted. Contentment with drudgery is not really evidence of planning capacity. If we may infer anything about intelligence and industrial ability in the Filipino from the test results we would say that he is intellectually dull, but that he has some good temperamental qualities which should make him a very valuable plantation laborer if he is given some time to adjust himself to the new environmental conditions he finds in Hawaii.

Hawaiian and Part-Hawaiian Group

The Hawaiians and part-Hawaiians, fourth on the list with 239 children, number 53.63 cases referred for every 1,000 of their population. It is of interest to note the large percentage (16%) at Waimano Home. This must not be interpreted as proving clearly a bigger percentage of feeble-mindedness among the Hawaiians, but may be the result of a different attitude among these people. They are much more ready to make use of the territorial institutions than are the other racial groups; and also the family ties are not strong among them. Children are exchanged among friends and relatives so freely that a good many of the children particularly at Waimano Home had not been living with their own parents, but with adopted ones. Such being the case, it is readily understandable that when a child is found to be mentally defective the guardians would not make special efforts to keep him at home.

As for behavior problems too, the Hawaiians have about the same proportion as the Filipinos; 28% of the number referred came because of some unsatisfactory social reactions. With regard to the test scores, the average Binet I.Q. is 69; the average Maze I.Q. is 84.32. Here apparently is the secret of the Hawaiian ability to get along; the average Hawaiian has somewhat inferior intellectual equipment in certain directions but like the Filipino he makes the most of what he has. The Hawaiians are largely represented in the Opportunity School—the ordinary school routine and discipline are undoubtedly irksome, and the

average Hawaiian does not have sufficient regard for academic achievement to induce him to continue any longer at school than he can possibly help.

In the examination of the group of Hawaiians an interesting fact appeared which could not conveniently be set forth in the tables. In both the Binet and in the Maze tests, the highest scores are consistently made by the Caucasian Hawaiian mixtures. The common idea that the Chinese Hawaiian is the finest mixture is not borne out by the test results. As far as success in the tests measures ability, the Caucasian Hawaiians have the advantage over the other mixtures. In the Binet results, the Caucasian Hawaiian mixtures were the only ones who scored above 90 I.Q.

Spanish and Koreans

After the Hawaiians, the numbers referred drop extremely rapidly. The Spanish, a very small group of only eight cases, come next, with 35.97 referred cases for 1,000 school population. The Spanish have a low average Binet I. Q., 69.5, and a Porteus Maze I.Q. of 83.75. The median chronological age for this group is 14.4 years, the oldest of all the groups, which may reduce the importance of the relatively good average Maze I.Q. The older the person, the easier he finds the Maze test.

The Korean group had only 17 cases with a proportion of 31.31 children referred per 1,000 population. The median chronological age of 8.75 years of these children is much younger than any of the other groups; and 76% of them are in school from the first to the fourth grades. The proportion of behavior cases is not large—24%—which corresponds very closely to the average proportion for the entire group. The low chronological age of the Koreans may help to explain the high average Binet I.Q. which is 82.9. The Porteus Maze average I.Q. is 90.9, higher than for any other group.

The survey of the test scores and the percentage of behavior problems might lead us to believe that the Koreans are superior to the other races in their intellectual capacity and also in their ability to adjust to new situations. This view is confirmed by the results of group tests given by other investigators; yet at the same time, two of the most baffling problems that have been presented to the Clinic were Korean children, and a third was half Korean and

half Japanese. These three children appeared extremely self-possessed and seemed quite impervious to the suggestion that they were making matters much more difficult by their absolute refusal to co-operate with any of the attempts made to help in their readjustment. They would not commit themselves to any program of action, and seemed to resent what they considered an intrusion into their affairs.

The group of mixed bloods other than Hawaiians have 24.39 children referred per thousand school children. The most interesting point about this group is that 57% of the total number referred were behavior cases. The group is small, numbering only 14, with a median chronological age of 13.4 years. This group is slightly older than most of the others; the average Binet I.Q. is 71.9, the average Maze 84.58.

Chinese Group

The Chinese quota of referred children was 75 cases which was 17.43 per thousand. The great majority of them were in the lower grades. The numbers at Waimano Home are low and those in the Opportunity School are few, only 7% against an average of 23% for the entire group. The number of behavior cases also is low, being only 13% of the total number, while the average percentage of behavior cases for the whole group is 23%.

The average Binet I.Q. for the Chinese is 74, while the average Maze I.Q. is 76.1. The Binet and Maze are very close together, which suggests that the Chinese do not appear to possess the good temperamental qualities which we have found so striking in the Hawaiian and Filipino groups.

Japanese Group

The Japanese occupy an extremely favorable position in this rating according to number of children of school age referred for every 1,000 school population, their quota being only 14.98. Only a small percentage (6½%) of their number is at Waimano Home, while 23% are above the fourth grade in school. The number of behavior problems likewise is small in comparison with the rest of the group. The average Binet I.Q. for this group is 75.3, the average Maze I. Q. is 84.27. The excellent temperamental qualities of the Japanese which have previously been indicated by Porteus and Babcock apparently tend to be

possessed by the duller children as well, a difference of 8.97 points in I.Q. between the Maze and the Binet results being very significant. It is also interesting to note that the Japanese have only a small percent of their number in the Opportunity School.

Racial Status

The Caucasian group of 15 cases had only 12.82 referred for their school population. It is perhaps noteworthy that 43% of this group are behavior cases. The average Binet I.Q. is 82.1, while the average Maze I.Q. is 85. The young Korean group slightly overtops them but the Caucasians have a median chronological age of 12.15, over three years older than the Koreans. The numbers are so small however that they are hardly comparable with the other groups.

Since both the Binet and Maze tests are required to get a more adequate picture of the mental level of the children examined, the median Binet I.Q., given double weight, and the median Maze I.Q. for each group were averaged. The Binet was given double weight, because the variability of the Maze is about one and one half times as great as that of the Binet, and it seemed advisable not to consider the Maze as of equal value as the Binet on this and other accounts.

When this was done, we arrived at an approximation of the intelligence of the various groups when both the temperamental and the intellectual qualities were taken into consideration. The Caucasian heads the list, followed very closely by the Koreans. The Japanese are next, about half way between the Koreans and Hawaiians, Filipinos, and Chinese who are practically all on the same mark. The Portuguese-Caucasian, Portuguese and Porto Rican follow indescending order. The following table shows the relative positions.

TABLE VII

Median Binet and Maze Scores Combined

Racial Group	I.Q.
Caucasian excl. Portuguese.....	88.
Korean	85.61
Japanese	79.29
Hawaiian	75.92
Filipino	75.38
Chinese	75.08
Others (incl. Spanish)	74.81
Portuguese-Caucasian	72.8
Portuguese	71.69
Porto Rican	65.7

Clinic and Research Cases Compared

One of the interesting things brought out by the analysis of the referred children is the parallelism between the Maze scores and the results for the different nationality groups as reported in Temperament and Race. The following table shows the results of the Maze tests for the normal research cases and those referred for special examination.

TABLE VIII

Comparison of Porteus Maze Test Average I.Q.s

Nationality Group	No.	Research Group	No.	Referred Group	Diff. in I.Q.s
Haw'n and Part-Haw'n....	95	100.14	223	84.32	15.82
Japanese	406	99.4	117	84.27	14.13
Filipino	156	97.67	22	83.09	14.58
Chinese	388	92.2	65	76.1	16.1
Portuguese	97	91.5	154	73.5	18.0

Here we have surprising confirmation of the theory that differences in temperamental traits as indicated by Maze test results are related to racial differences.

The order of the nationality groups in Maze scores is exactly the same for both the normal and the clinic cases, but from 14 to 18 points lower in the latter, as we would expect in a dull group. In spite of the fact that these referred children were highly selected, all of them being maladjusted in some way, while the others were taken as they came in school, the results for the different nationalities show the same tendencies. If the same results can appear in two

experiments of such varied character, surely it is not due to chance. There are real and significant racial differences in those qualities of planning capacity, persistence, suggestibility or possibly common sense that are measured by the Porteus Maze tests.

Children of Pension Cases

Early in this discussion we mentioned the group of children of pensioned families who were examined. The racial groups were too small to admit of division, so the average and median I.Q.s were found for the entire group. The following table shows the scores of these children as compared with the total group of referred children.

TABLE IX

Comparison of Pensioners' Children with Referred Cases.

Group	Binet			Maze		
	No.	Av. I.Q.	Median I.Q.	No.	Av. I.Q.	Median I.Q.
Pensioners	82	88.41	87.63	81	92.78	90.31
Referred Cases ..	753	72.32	72.72	695	80.943	79.31
Research Cases ..	651	85.45		1142	97.65	

We find that the average I.Q.s of the pensioners' children in both the Binet and Maze results are considerably superior to the group of referred children. Their average Binet I.Q. is slightly higher than the average I.Q. for the normal children reported in Temperament and Race, which would indicate that the children of pensioned families are of average intelligence; but in consideration of the good Binet scores, they make a rather poor showing when compared with the normal children on the Porteus maze test. Their average of 92.78 compared with 97.65 of the normal research cases would indicate that this group does not have as good temperamental qualities as the average of the population. If these temperamental traits are hereditary, it would throw some light on the question of social dependency. It appears not to be so much a matter of intelligence level as of the temperamental qualities of persistence and planning capacity. Those who lack these qualities then are the first to require help from social service agencies when some special stress of circumstance disturbs their plan of life.

Of this special group, 2% of the cases are definitely feeble-minded by both the Binet and the Maze tests. An-

other 8% are dull, with extremely inferior temperamental qualities and will probably have a great deal of difficulty meeting even the ordinary demands of society. We may consider then, that of this group of 81 cases, 10% of the children will probably continue to be dependents in one way or another even after they are grown. 17% of the group are dull, with rather poor temperamental qualities. It is extremely likely that these people will live very close to the margin of safety, so that any unusual demands may be too much for them; with only slender mental equipment and such temperamental defects as lack of planning capacity, suggestibility and impulsiveness, life is very likely to find them unprepared in emergencies.

For the other 73%, there should be little cause to feel concern. While some of them have rather poor temperamental qualities, they appear to be bright enough to be able to compensate for some temperamental instability. On the whole the outlook for these children is very encouraging. In spite of the fact that when judged by the dependency of their parents, they are drawn from a socially inferior group, nevertheless there are 13 children, 16%, who are considerably above average in ability and can be expected to adjust themselves to the demands of the community when they are grown. It seems that whatever help can be given these families to tide them over the lean years until the children can assume responsibility is eminently worth while. It is decidedly encouraging to see that even among the progeny of such a socially inadequate or at least socially unfortunate group as these pensioned families some very intelligent children will be found.

PART VI

CASE HISTORIES

A discussion of the various aspects of clinical psychology would give only a partial picture without the conclusion of a few case histories to show just what situations are constantly recurring and what facilities we have to deal with them.

The following reports which have been taken from the records of the Clinic have been chosen to represent as varied mental and social types as possible—incipient insanity, psychopathic, constitutional inferior, feeble-minded, social defective, maladjusted without mental dullness and one case with special talent.

It will also be possible to gain some idea of the activities of the social organizations in Honolulu and their relation to the Psychological Clinic. As has been stated before, the Clinic can only recommend that certain steps be taken in the adjustment of the children referred; so that a very large measure of the success in individual cases depends upon the co-operation of the agency referring each child. From these histories can be gained an idea of the problem which these different organizations are facing, and what adjustments can be made for various types of cases.

CASE HISTORY NO. 1

Mental and Social Defective

When Philomena was about 8 years old, her father, a Filipino plantation laborer, killed his wife's lover, and was sent to the Oahu prison. The child's mother promptly deserted her and Philomena was left to get on as best she could. She lived around the plantation with the Filipino men, the property of various ones in turn, doing their simple housework, and receiving none of the usual privileges of childhood.

Last November, alarmed by their belief that Philomena, then 12 years old, was pregnant, the Filipinos decided that the responsibility might be fixed upon them, so they brought the girl to Honolulu to her father who was still in jail. The situation was naturally too much for the father, but

a Chinese storekeeper who lived near the jail took the child to the Salvation Army Girls Home, where she remained for two months.

Later developments showed that the former fears were ungrounded, but then since some arrangements had to be made for the child's future she was turned over to the Child Placement Bureau. The problem presented was whether or not, if she were given a good home and regular schooling, Philomena could become capable of self management and self support, and put these very sordid early experiences behind her. Before any steps were taken towards such home placement she was brought to the Clinic for a mental examination.

The Binet and Porteus Maze tests both placed her at a 6 year mental level, with an I.Q. of 48. In the Binet tests she could not differentiate right and left, could not detect the missing features, repeat 5 digits in order or 3 digits backwards. In spite of the fact that she presumably had been housekeeping for various men for at least 4 years, she did not recognize all of the coins, could not make change or even count backwards from 20 to 1. If she had 10 cents, and spent 4 cents for candy, she believed that she would have 5 cents left. She expected 10 cents change when she bought 12 cents worth of candy and gave the man 15 cents. She could write her last name, a word of three letters, but "Philomena" was too difficult for her.

In the Porteus Maze test she was very willing to cooperate but failed to understand the instructions for the 5 year test. She did pass the 6 and 7 year tests but the higher ones were too difficult for her, so that her Porteus Maze test age also was 6 years.

The cards of circumstance appear to have been stacked against Philomena. She had been abused from early childhood until she neither knew nor expected any different treatment. She was so dull that even long-continued careful training could not be adequate insurance against her going back to the same sort of life she had been living if once she were free to try to take care of herself. She was a girl for whom permanent supervision and care was absolutely necessary; she did not have sufficient intelligence to warrant even the slightest hope for her successful adjustment. For this reason she was committed to Waimano Home for the Feebleminded where she will undoubtedly learn to be a very useful member of that special community

and will be spared the miserable existence she was fairly launched upon.

She is selected as a case of a mentally inferior type of individual whose social background has also been extremely unsatisfactory. Without mental examination the fact of her mental deficiency would not have been apparent. She would probably have been committed to the Industrial School until twenty years of age and then have been turned adrift in the community.

CASE HISTORY NO. 2

Familial Feeble-mindedness

This history has been chosen because it shows so plainly the necessity of the early recognition of mental defectives and proper disposition of them before they can become too serious a burden upon the community.

At the Girls' Industrial School two years ago, Alice, Carrie, and Rose, aged 12, 10 and 8 years respectively, were sent in for examination. They were extremely talkative, and from the two older ones it was possible to piece out part of the family history.

Carrie's father had died; all the other children in the family belonged to the second husband, a German. The mother was Portuguese. The father and mother fought most of the time until finally divorce proceedings were instituted. The chief cause of complaint was that the man hid his money from his wife, and then used it to take other girls to the movies.

Carrie and Alice had apparently no home control; they did not go to school because they had no clothes, but they would go regularly to the plantation camps with the result that their sex experiences began very early, at about 8 and 9 years of age. The boys would "chase them into the guava bushes" and no one interfered with these pursuits; the father did not care, and the mother was too ineffective to do anything about the matter if she had so desired. The climax came when Carrie, at the age of eleven, spent a week in one of the camps with a Porto Rican. The court authorities intervened, put the man in jail and all three girls, Carrie, Alice and Rose in the Sisters' School in Hilo. They were there for about six months, then ran away. Following this episode, the girls were all committed to the Girls' Industrial School.

The reports from the Industrial School were unfavorable for all the children, but Carrie in particular had an extremely poor record,. Her personal habits were very bad. She would eat garbage, was not clean either day or night and could do no household tasks at all. In fact the school felt that a great deal had been accomplished with Carrie when she learned to bathe herself. She was ill-tempered and obstinate, would pinch the other children and was naturally unpopular with the other girls. She spent most of her time cleaning up the yard, a very low grade type of employment.

Alice had shared the previous experiences of Carrie, but she was not quite as troublesome at the Industrial School, due mainly to the fact that she did have fairly clean habits.

Rose, the third child, was very small for her age, but seemed alert, rather bird-like in her reactions. She had been paroled to her grandparents, but was returned after two months with the complaint that she was incorrigible.

The mental test results showed that all three children had attained a mental level of about five years. Carrie, at 12 years 8 months, had a Binet test age of 5 years 3 months, I.Q. 42. Her only successes above the 5 year level were knowing right and left and counting 13 pennies.

The Porteus Maze test was 6 years. She was extremely pleasant about the matter but was quite unconcerned at her failures.

Alice, age 10½ years, made a Binet score of 5 years 6 months, I.Q. 52. She could not do the divided rectangle test in year 5, but in year 6 knew right and left, missing features and counting 13 pennies. She failed all other tests above the 6 year level. The Porteus Maze test age was 7 years. She was very slow to get the instructions and while she too appeared to try she could accomplish very little.

Since Alice and Carrie were both mentally defective and had failed to make any proper social adjustments they were committed to Waimano Home for Feeble-minded.

Rose was only 8 years 5 months old when she was first seen; and her Binet test age was then 5 years 6 months, I.Q. 65. She too failed the divided rectangle test in year 5, and did not recognize all of the coins in year 6. Her

Porteus Maze age was 7 years. She was slow to get the idea of the test but did improve once she was started. While the tests showed that she was extremely dull, it was recommended that she should remain at the Industrial School for a time to see what improvement she would make under the training that she would receive.

A year later Rose was examined again; the reports showed that she was not profiting by the training she was receiving at the Industrial School. On the second test she scored 5 years 9 months, I.Q. 61 by the Binet. She drew a diamond from copy in year 7, which was her highest success. Her physical condition was excellent but her behavior was so erratic that the teachers could not keep her in school. On the basis of the lack of improvement and the very unfavorable report from the Girls' Industrial School Rose was sent to Waimano Home in June 1926 to join Carrie and Alice.

The family situation was presumably disposed of as far as the Clinic was concerned when the three girls were sent to Waimano Home. In October however the Juvenile Court brought in still another member of the family, Joseph, age 6 years 10 months, accompanied by the mother. From her we learned that Joseph did not start to walk until he was 4½ years of age, and at nearly 7 he was able to say only two or three words. He was suffering from chronic dysentery, had ugly sores all over his face, and was plainly idiotic with a mental level of about 1½ years.

An interview with the mother brought out the fact that she was then 29 years of age. She was married at 16, and had 8 children; three already at Waimano Home and a fourth on his way to the same institution, one still at home and three others who had been adopted in Hawaii. The husband was expecting to follow his wife to Honolulu in about 6 months, and the divorce proceedings had died a natural death.

While we have not seen the other four children, it seems highly improbable that they can be anything but extremely dull if not actually mentally defective. The great pity of the whole affair is that one or both parents were not themselves placed under permanent social control before their marriage and propagation of a defective family. These four children will never contribute anything in return to the Territory for the care which is being provided

for them at the expense of the community. The loss to the Territory for this one family will probably be about a hundred thousand dollars, since it is equivalent to a pension of five hundred dollars a year for each child to maintain them at Waimano Home. Usually such pensions are given as the reward of public service but in this case the premium is paid for social inefficiency and helplessness. From another standpoint it is of course a premium for community insurance against the probability or even certainty of these individuals transmitting their defect to a numerous progeny, and as such is decidedly worth while. The point however that by means of methods of mental diagnosis a decided saving is effected by the early detection and segregation of such cases.

CASE HISTORY NO. 3

Unmoral or Delinquent?

Lily came to the Clinic with her six weeks old baby. She had been on parole from the Girls' Industrial School and was employed in domestic service. Some months before, while working at Kohala, she had met Manuel, a married man, who continued to meet her after she changed her position. On Lily's afternoon off she would go for a ride with Manuel, and would meet him in the evenings, with the result that their child was born early in February. She had been staying at the Salvation Army Rescue Home for the last two months, and it was from there that she came for examination.

While Lily had not been to the Clinic before, we had previously examined her 9 year old brother, Sammy. He was referred for examination last year primarily because he was persistently indulging in bad habits in the school room. His Binet test age was 6 years 8 months, I.Q. 70; Porteus Maze $9\frac{1}{2}$ years, I.Q. 103. Sammy was sent to the hospital for circumcision which seemed to help his special problem very much. Permanent correction can hardly be hoped for in the boy's case, as long as he lives with his mother who is reported to be a prostitute, totally unfit for the responsibilities of parenthood, as we shall see from the history of Lily.

Lily herself had formerly lived on Kauai. At 14 years of age she was committed to the Girls' Industrial School on the charge that her mother was using her as a prostitute.

She was paroled several times from the Industrial School; once she was returned on a complaint of petty thieving. She had been working for several months on parole when it was discovered that she was expecting a child. The Superintendent of the Girls' Industrial School considered her a feeble-minded girl, perhaps because her mother is supposed to be feeble-minded.

Lily earned a Binet test age of 10 years 6 months, I.Q. 75. She did very well indeed in the language tests, but not so well in the ones which are directly dependent upon native ability, such as arranging weights and the 60 word association test. The Porteus Maze test age was 12 years. She made several errors, most of which were due to impulsiveness and suggestibility.

On the basis of the test results, Lily is certainly not mentally defective. She is dull, but her anti-social conduct cannot be laid at the door of defective intelligence.

Lily's own attitude toward the whole situation is decidedly simple and naive. Her intimacy with Manuel had existed over a long period yet she had not discovered the fact of his marriage. While fully aware that trouble would likely ensue she made the mildest of remonstrances against his advances. Even now the fact that she has borne an illegitimate child gives her very little concern. She is extremely proud of her baby and has decided to keep it herself even though no help can be expected from Manuel.

Lily is a good instance of a primitive nature which has been certainly exposed to the influence of civilized conventions but without effect. She shows in her make-up many traits which under other circumstances are admirable in the Hawaiian; good temper, a desire to be agreeable and to please, an easy-going, affectionate and trusting disposition—traits however which are a poor protection for an unmarried girl without the support of family and public opinion behind her.

In Hawaii the whole problem of illegitimacy and sexual morality must take on different aspects to what it does elsewhere. There is naturally no great stigma attached to unmarried motherhood; it is unfortunate but hardly blamable. Compliance with the wishes of any one who can establish the bonds of affection and confidence with them is an outstanding feature of Hawaiian character, a disposi-

tion which is very different to that of the sophisticated Westerner.

Another factor in the situation is the fact that it is comparatively easy for a part-Hawaiian child whether legitimate or otherwise to find a home. Hawaiians are generally very fond of children and show a ready sympathy towards the homeless.

These things being so, it is impossible to take up a condemnatory attitude towards girls like Lily. Generally speaking her action cannot properly be described as anti-social. It is probably not true to say that her sex instincts are over-developed. In other directions she gives no cause to be considered delinquent and if she should be married there would probably be no further trouble.

In this connection it is worthy of note that while the Industrial School is full of so-called delinquent girls the Territorial jail has at present no women inmates. This means one of three things. Either the girls are reformed or the community takes up a more tolerant attitude towards the misdemeanours of adult women or else the girls get married and settle down to a condition of average respectability. The last-named would undoubtedly be the situation with Lily and under these circumstances she probably would occasion the community no further concern. For this reason she is to be considered unmoral rather than immoral or delinquent.

CASE HISTORY NO. 4

Incipient Dementia Praecox

This case is chosen as illustrating the psychotic individual who goes unrecognized in the community during the earlier stages of his condition.

The circumstances surrounding the case are extremely tragic. The subject of the examination was a young man aged twenty years who was serving a sentence for a double murder. The statement of the prosecuting attorney was to the effect that the prisoner had been told that one of his victims had called him an obscene name which however is probably not uncommon in army usage. When he came off guard he saw this man and without any warning drew his pistol and shot him. Then he ran a hundred yards to the pool-room where he shot another man, the only motive

for this second murder being that he was a friend of the first victim.

The prisoner's statement was that he had hardly any recollection of the occurrence at the time and even at this later period could not connect himself with the crime. He remembered having other uncontrollable fits of rage when he was younger and in these he was apparently oblivious of his surroundings and actions. On account of his extreme youth and good record he escaped the death sentence.

At the time of the trial he had been under medical observation for some time and adjudged sane. The immediate purpose of our examination was to see what studies he should take up prior to his pardon and release which was expected within a year or two.

When seen, the subject appeared nervous and somewhat dazed and uncertain at times. He was quite ready to co-operate in the examination and to talk freely about the crime. He appeared rather devoid of the natural emotional reaction when discussing it, almost as if it were an impersonal affair. He could give no adequate reason for the murder and seemed puzzled himself over the whole matter.

The mental tests showed no inferior capacity. His Binet and Porteus Maze tests were up to the average and showed no marked deficiencies. However the examiner noted that there were frequent 'blockings' of consciousness. He would often stare vacantly for a time when asked a question and then suddenly give the answer. In a ten minute free association test he wrote only 74 words and there were frequent long pauses and inadequate associations of ideas. His reactions were similar to those of some epileptics although there was no history of any seizure or fits.

From the general mental and emotional reactions the examiner came to the conclusion that the subject was psychotic. Confirmation was given to this view by further investigation. He was morose and solitary in his habits and suspicious that the other prisoners were talking about him and disliked him. Recommendations were made to the effect that no further efforts on the part of his friends should be made to bring about the release and that he should be transferred to a military prison where he could be under psychiatric observation and treatment. Before these recom-

mendations could be put into effect the prisoner committed suicide by hanging.

The referring agency in this case was the educational director of Central Union Church who had become interested in the case.

CASE HISTORY NO. 5

Psychopathic Tendencies

This girl has been chosen as typical of a very common problem presented to the Clinic. She is Portuguese, 16½ years of age, and was referred for examination by the Social Service Bureau on account of a general mal-adjustment in the home.

Elizabeth was the youngest of a family of seven girls, and with her sister Katie had been brought up in a girls' orphanage until she was 14 years old. At the time Elizabeth came to our attention she was living in Honolulu with her sister Annie who was married and had four children, two by a former husband. Katie, on leaving the orphanage, had gone to Hawaii to another sister. The general family situation may be judged by the fact that Katie had a child by this brother-in-law, and was then married in haste to a good-for-nothing man whom she left after two weeks, returning to live with the brother-in-law by whom she had a second child. Following this, she came back to Honolulu with her two children to live with Annie.

Elizabeth then was living in a home which consisted of her two sisters, her brother-in-law, four children of Annie and Katie's two illegitimate children plus four male boarders who live upstairs in the house. Naturally, even in an ill-managed house there is a great deal of work and Elizabeth was the family drudge, getting up at 5 A. M. to do the endless washing and the rest of the housework. Opportunities for recreation were very small; Elizabeth had been once to the movies in six months, had gone for a motor drive several times, was not allowed out on Sunday though she might have her two girl friends to see her.

The strain of overwork had the result of making Elizabeth emotional, irritable and peevish. The family continued to repress her and keep her in order. She finally discovered that her best weapon to bring them to terms was a fit of hysterics in which she would scream and yell and rouse

the neighborhood. Punishment by the brother-in-law was ineffective so that finally Elizabeth got the upper hand and would go into a tantrum on any pretext that occurred to her.

The social worker was called in on one of these occasions when Elizabeth was having an hysterical fit, because the sister, who was going to town to buy some furniture, broke her promise to take Elizabeth with her.

The mental examination and interview showed that Elizabeth was certainly not bright. She had only reached the fourth grade in school and her mental age was 9 years 9 months. She could not arrange the weights in year 9, and the 10 year rote memory test marked the limit of her ability in that direction. She could not give 60 words in three minutes, nor succeed in the reading and report test. The Porteus Maze test showed temperamental inadequacies also, her record being only 10 years. As soon as the test became difficult Elizabeth made a very poor response.

From the interview with the girl it was seen that there were decided indications of instability and that her only way of affecting the attitude of others towards her was to give way to tempers and allow her emotional tendencies free rein. She was not intellectually able to adjust herself in a more intelligent way and lacked the initiative and planning capacity to seek any other avenue of escape. It was evident to the examiner that, unless her environment was changed quickly an hysterical habit would result and her future adjustment would be difficult if not hopeless.

She was placed in another home, allowed control of her own earnings, and encouraged to manage her own affairs as much as possible. She did splendidly for three months, and then over some trivial grievance or other, broke out into a violent hysterical spell. She had to be removed and, after a period back in her previous home, is now ready to make a new start. The outlook is however not bright. Earlier contact with the girl might have resulted in control of her psychopathic tendencies but at present she will need close supervision and constant change of occupation.

CASE HISTORY NO. 6

Constitutional Inferiority

This case was a soldier who was referred to the Clinic for examination by the U. S. Army authorities. The young man was awaiting trial on eleven charges of passing valueless checks; making false declarations etc.

The personal history of this case was very interesting. When a boy he had lived with his grandparents and an aunt who was extremely indulgent to him. He went to high school for one year, and Pennington Academy for three years. His ambition was to enter West Point but his aunt's marriage interfered with these plans as the grandparents were unwilling or unable to keep him at school. He claims that he was for three years at a University in Florida and was then principal of a school in Florida. There he got into trouble through passing valueless checks and was sentenced to the State Penitentiary. He seemed a little uncertain as to the actual term served. After his release he became an instructor in history in a high school in New Jersey, where he again got into trouble but escaped prosecution. He then came to Hawaii where he enlisted.

His career in the army has been much the same as in civil life. He is a very glib talker, and managed to impress his fellow soldiers so that he was able to borrow money from them. To pay them back he passed a number of small checks and through his connection with the Boy Scouts (where he posed as a former director of Scout work) he was able to pass off more checks. His claims were investigated with the result that his past record was uncovered.

The examination showed that he was an unmitigated liar making all sorts of claims to extensive educational experience. He seemed to have a very inadequate realization of his own position and put himself very much in the role of a persecuted and aggrieved person. His emotional instability was betrayed when he spoke of his aunt's marriage to which he attributed all of his experience. He felt that this had been a turning point in his life and that through her desertion of him all his ambitions had been thwarted and he had been actually driven to crime. He wept bitterly at the recollection of the marriage even though it had occurred thirteen years before.

The clinical examination proved that he really did not possess the mental capacity to realize his ambitions. The jobs which he has held at various times have all been beyond his intelligence so that he has failed in all of them. But his insight into his own character was so inadequate that in every case he blamed circumstances for his failure. Mental tests showed that he was somewhat below level of the average adult, that his education was very shallow and these facts coupled with his evident instability were sufficient to account for his failure. Yet he was able to impress people very favorably and this had accounted for his many opportunities for fraud and misrepresentation. His plans for the future were just as grandiose. His aim was to be a college president even though a long jail sentence was hanging over his head.

The outcome of the trial was a sentence in the military prison but good behavior materially shortened the term as the last heard of this man was that he had been released and that he had organized a company under the name of the "Security and Fidelity Trust" in New Jersey. He can safely be expected back in jail within a brief period. He is a good example of a constitutional inferior with however sufficient surface ability and a gift of plausible lying to enable him to work himself into positions of trust and responsibility where he may get the chance to practice fraud. There were no indications of any psychosis and his mental level was too high to justify his inclusion among the mentally defective group.

CASE HISTORY NO. 7

Bright with Special Aptitude

It must not be thought that all who come to the Clinic are either dull or psychopathic, but so many of them are that Cecelia presents a very striking contrast.

Her father, a Filipino tattoo artist, died a year ago, and her Hawaiian mother had recently been so ill that she had to go to the hospital leaving the family of six children to take care of themselves as best they could. The Social Service Bureau gave them help and was planning to place the older children at the Salvation Army Home but before this was done, the four oldest came to be tested.

They were well built, attractive children, all testing at normal levels, but Cecelia was particularly interesting. She

brought her celluloid duck with her, and while she waited, drew a picture of a "DUCK SWIMMING." Here was the duck in the foreground exceptionally well drawn; he was swimming in a conventional pond with fish swimming in the water in the opposite direction. The pond was at the foot of two grassy mounds; on one was a house with trees around it, on the other a solitary palm with a road leading to it. A man was walking from the house toward the lone palm. Here was a remarkable thing, a nine year old Filipino Hawaiian girl, sitting down of her own accord and not only copying her duck, but giving it an imaginative background in very good perspective, and so making a picture that was real even if of crude artistic merit. The same imaginative tendencies were apparent in other instances. All of the children were asked to draw a man. The rest drew the usual crude pictures but Cecilia's drawing showed the man in action, walking across a room with a table, chair, carpet, window, and even some dishes on the table.

The tests also were extremely interesting. Her Binet age was 10 years 9 months, I.Q. 118. She passed all of the nine year tests, and gained credit for giving five digits backwards and the memory for designs in year 12. Her failure in the ten year level was in the 60 word test. She was a little slow though she did start off rather well. The Porteus Maze test age was 12 years. She was extremely deliberate and drew each line very exactly. She was dependent upon the examiner for rather more instruction than bright children usually require, but once she got the idea she worked very well indeed.

Here is a child of humble parentage who nevertheless is not only above average intelligence but has a special talent as well. She alone of the four children inherited special artistic talent which her father must have had to do his tattooing. It is true that the father displayed special interest in Cecilia and encouraged her to do drawings, but there was undoubtedly a special aptitude in her case which repaid his interest. It would be going entirely beyond the facts to believe that Cecilia's talent is entirely due to her father's encouragement, which would have been accorded to the other children if they had shown the same ability. It is apparent that in this case there was a very real inherent ability.

As a result of the Clinic report to the social worker, arrangements have been made to have Cecilia given special

instruction in drawing so that any talent which she has in this direction may be further developed.

CASE HISTORY NO. 8

School and Home Mal-adjustment

Fred, age 14 years and 7 months, a German Hawaiian boy, came to the Clinic because he was accomplishing nothing in the sixth grade and the teachers said that he was paying so little attention to his school work that he would go to sleep right in the classroom.

The interview with the boy and the family history obtained by the visiting teacher helped a great deal to explain Fred's present difficulties. His own father had left home, and his mother was at that time living with a negro. One boy, older than Fred, was a cement inspector but his earnings were insufficient for the family. For some time Fred been selling papers and helping as best he could, but a month before he had found a new job which would pay \$30. a month and still permit him to go to school which he was anxious to do. He had gone to work delivering milk, going on duty at 10 P. M. and working until 5:30 A. M. He would then go home, sleep for about an hour, go to school and sleep again in the afternoon for a time. He enjoyed his school work and had always done fairly well until this time, but he simply could not stay awake in school after being up all night.

The test results show that Fred had a Binet age of 12 years, I.Q. 85. There were no special disabilities, and his response throughout was marked by care and attention to the details of whatever he was asked to do. This was especially marked in the memory for designs which he reproduced in an accurate and finished manner. His father was a carpenter, and Fred seemed to have some of the same qualities that would make a good workman.

During the interview the examiner became more and more favorably impressed by the boy's attitude. In spite of the home situation, he had willingly assumed responsibility for the family welfare and was cheerfully giving all of his earnings to his mother. There was something very winning about the boy's manner, he had the persistence, industry and attention to detail which is commonly associated with German blood, and he had just enough admixture of

the Hawaiian good nature and cheerfulness to endear him to all of his associates. His teachers were fond of him in spite of the fact that he was not keeping up with his work, and had been interested enough in his welfare to ask the visiting teacher to help with his case. He was anxious to remain at school but under existing circumstances, it seemed quite impossible.

He had good ability, but what was more important, he seemed to have such excellent traits of character that he deserved to have some opportunity to develop them. He obviously could not remain at home and still go to school as there was no assurance of permanent support, and he would be forced to give up school entirely, in at best another year.

The visiting teacher found that there was an opening at Kamehameha Boys' School, but they preferred to take only boys of excellent mental endowment. Arrangements were finally made to take him on trial, with the possibility of remaining if he proved a good student. Later reports showed that he is getting along very well. He is not a brilliant student but is doing thoroughly commendable work and gives excellent promise for the future.

This boy represents one of the most successful adjustments that has come to the attention of the Clinic, but it shows that the bare mental test results do not always tell the whole story and that if we are to make recommendations for child guidance it is absolutely necessary to take into account the total situation, intelligence, temperament, home situation and character traits as well.

PART VII

SUMMARY

In summarizing the results of the mental tests, we find first that the large majority of referred children are retarded in school, and that of the entire group of 760 children examined only one was advanced in school grade for his age.

It was found to be impossible to set a definite mental age limit to differentiate the dull and the feebleminded. We must consider each case as an individual, and also take into consideration his race, social and occupational status and home conditions, before a definite diagnosis can be made. The policy of considering a Binet I.Q. of 60 as the upper limit of intelligence of children committed to Waimano Home appears to be sound. While undoubtedly there are mental defectives in the community who can test higher than this, still so many of the very dull people can get along in the community that it would be extremely unwise to place the upper limits of feeblemindedness higher than this. Only in special cases where the child is epileptic or so crippled that he cannot be taken care of anywhere else should this policy be relaxed.

In comparing the different nationality groups the Porto Ricans hold the most unfavorable position. They have the greatest number of referred cases in proportion to their population and both the Binet and Maze I.Q.s are lower than for any other racial group. The proportion of behavior cases is not great, but they appear to be quite incapable of keeping up with the demands of the public schools, and the problem of retardation among them is more serious than any other.

The result of the racial comparisons that can be made on the basis of mental tests is to emphasize the need for more research. The Portuguese for instance obtain notably low results in the tests that have been applied to them. Whether we take the Binet or the Maze they do not make a very impressive showing. In correlation with these results we find a great deal of retardation in school and a large proportion requiring the special educational treatment that the Opportunity School affords. Further, we find that this nationality is well represented in the records of juvenile delinquency. Yet social observation would show the Portuguese constitute a comparatively well stabilized group in

the population, many of them occupying positions in stores, offices and mills, many of them also owning their own homes and displaying thrift and orderliness in their upkeep. Their inferior showing may be due to their great variability, which would mean that a large number of them are at either end of the scale of ability and the Clinic is naturally seeing only the misfits; but it is more reasonable to suppose that there are traits in the Portuguese make-up which are not being given adequate weight in the tests and that these traits are of social value.

As regards the Maze test results the excellent showing of the Filipinos and the Hawaiians is somewhat out of proportion to their social reputation. Neither race is credited by the community with the foresight and prudence which their Maze test results would appear to indicate. Very possibly their inferior showing in the Binet however would tend to counterbalance their success on performance tests.

Before condemning the tests as poor indicators of social value in the racial group, several cautions are necessary. In the first place the social reputation of the Hawaiians, to take one example, depends on the people of the older generations, while the test results are gathered with the children. The mixtures of blood will, as time goes on, become greater so that the social character of each generation may change. The younger Hawaiians may possibly display more initiative and resource than their parents. The younger Portuguese on the other hand may be less socially minded than their parents, or it may be that with the growth of the city and the lessening of restraint these young people are going through a difficult period of adjustment which makes them appear unreliable and somewhat unstable.

In the second place our comparisons of races are limited to the middle and last periods of childhood and what changes take place with adolescence we cannot say without further experiment. There is some evidence however that both Filipinos and Hawaiians display some precocity of development and that they do not tend to maintain this rapid progress into adolescent years, the period of mental development being short and rapid. In any case, we need further work to enlighten us on this point.

The Oriental groups appear in a much more favorable light than do these others. The Koreans especially seem

superior to the others in their intelligence and temperamental traits as well. While the Chinese do not do as well in the tests, yet at the same time the proportion of behavior cases and numbers at the Opportunity School and Waimano Home are not large.

The record for the Japanese also is excellent. They have very few children referred, and the adjustment problems are chiefly related to their school progress. Apparently the majority of these children get along very well in school as long as the work is of such a nature that it can be learned from the book, for these children are not giving special trouble until they reach the fifth and sixth grades when they begin to fall behind. The work of the upper grades demands more abstract thinking than they are qualified to do, so that many of them who have passed every year previously suddenly find themselves quite unable to cope with these new demands.

The public school system is making excellent progress in a great many ways; the Junior High School should help considerably to take care of the students who have difficulty with the academic requirements of the upper grades, and the research bureau which is under consideration at the present time will very probably study the curriculum and make changes in methods and content of study so that our schools will be more suited to the needs of the Hawaiians and Portuguese children than they are at present. All these things are commendable and will undoubtedly prove beneficial to the group, but an essential part of this program from the standpoint of the clinical psychologist is one person to do purely individual work.

A great many of the cases which have been referred to the Clinic as very serious cases of maladjustment might have been averted if there had been some one closely connected with the schools whose duty it was to set the children straight when the first difficulties arose. The social service agencies help a great deal, but as a rule children do not come to them until they are "cases," and the same thing to a more serious extent is true of the juvenile court. If at the first sign of truancy or lagging in studies, a child could have individual attention a great deal of retardation and delinquency in Honolulu could be prevented. For this work a visiting teacher seems indispensable, for it is only through the schools that contact is possible for every child regardless of his social status or his religion.

Possibly the greatest hindrance to the practical application of clinical psychology in Hawaii is the fact that there is no provision possible for the near-delinquent child. It is an extremely difficult task in Honolulu to find suitable private home placement for the child whose maladjustment is beginning and for whom a change of environment seems absolutely necessary if we are to have a chance to conserve his character. The examination of such cases is of little value unless there is a chance for the psychological recommendations to be carried out. The urgent need for Honolulu would appear to be some form of twenty-four hour school where the children would be under constant discipline and training and where every effort would be made to provide the vocational training that would be helpful later on in helping the child to find a useful place in the community. From this school the definitely defective and the real delinquent would be excluded and under these conditions the school would be an extremely important factor in the conservation of Honolulu's youth.

TABLE I.

IMMIGRATION AND LABOR

Labor report of 42 Plantations of the H. S. P. A. for
May 1926, by racial classification

Classification	Total Employees on pay roll	Number on monthly basis	Number employees not on monthly basis
Men:			
Americans	1,219	1,156	62
Japanese	12,046	466	11,550
Filipinos	25,945	97	25,848
Chinese	1,297	55	1,242
Koreans	723	12	741
Porto Ricans	1,098	25	1,073
Portuguese	1,739	399	1,341
Spanish	74	4	70
Hawaiians	574	129	445
All others	209	131	78
TOTAL MEN	44,924	2,474	42,450
Women:			
Japanese	2,124	71	2,053
All others	546	69	477
TOTAL WOMEN	2,670	140	2,530
Minors, regular, male.....	532	2	530
Minors, regular, female.....	72	2	70
Minors, school	476		476
GRAND TOTAL	48,674	2,618	46,056

Annual Report of the Governor of Hawaii, June, 1926.

**TABLE II. JUVENILE DELINQUENCY AND DEPENDENCY
COMPARISON OF HONOLULU WITH NINE MAINLAND CITIES**

COURT	Population of area served	Delinquents		Dependents		Total Children for one year	
		Number	% per 1,000 Population	Number	% per 1,000 Population	Number	% per 1,000 Population
Los Angeles (County)	936,455	1,314	1.403	473	.505	1,787	1.908
San Francisco (County)	506,676	795	1.569	1,030	2.034	1,825	3.602
Honolulu (County)	169,300	330	1.949	117	.691	447	2.640
St. Louis	772,897	1,708	2.210	356	.461	2,064	2.671
Buffalo	506,775	1,143	2.255	33	.065	1,176	2.321
Minneapolis (Hennepin Co.)	415,419	1,000	2.407	549	1.322	1,549	3.729
Seattle (King Co.)	389,273	997	2.561	348	.894	1,345	3.455
New Orleans (County)	387,219	1,434	3.703	78	.201	1,512	3.905
District of Columbia	437,571	1,641	3.750	359	.82	2,000	4.571
Boston	162,091	952	5.073	63	.389	1,015	6.261

Statistics for 9 mainland cities taken from "Juvenile Courts at Work" by Lenroot & Lundberg. Investigations were made from March 1920-May 1921. Population from 1920 census. Honolulu figures from Governor's Report for 1926. Population estimated for 1926.

TABLE III**BINET TESTS****REVISED FORM****Year III.**

1. Points to parts of body
2. Familiar Objects
3. Picture description
4. Repeat 3 digits

Year IV.

1. Discrimination of forms
2. Counts 4 pennies
3. Copies square
4. Repeats 4 digits

Year V.

1. Comparison of weights
2. Aesthetic comparison
3. Definitions
4. Divided rectangle

Year VI.

1. Right and left
2. Missing features
3. Counts 13 pennies
4. Names 4 coins

YEAR VII.

1. Picture description
2. Repeats 5 digits
3. 3 digits backwards
4. Copies diamond

Year VIII.

1. Counts backgrounds 20-1
2. Definitions
3. Names 6 coins
4. Writes from dictation

Year IX.

1. Arranges weights
2. Change
3. Counts stamps
4. Sentence construction

Year X.

1. 4 digits backwards
2. Reading and report
3. 60 words
4. 6 digits in order

Year XII.

1. Memory for designs
2. Dissected sentences
3. Interpretation of pictures
4. 5 digits backwards

Year XIV.

1. Repeats 7 digits
2. President and king
3. Problems of fact
4. Mental arithmetic

Year XVI.

1. Interpretation of fables
2. Problem of enclosed boxes
3. Repeats 6 digits backwards
4. Code

TABLE IV. AGE—GRADE DISTRIBUTION OF REFERRED CASES

AGE	Waimano Home	Oppor- tunity	I	II	III	IV	V	VI	VII	VIII & H. S.	Not in School	Total
Below 6 yr.	1		1								4	6
6 ^o -6 ^u	2	2	19								4	27
7 ^o -7 ^u		12	16	7							2	37
8 ^o -8 ^u	3	36	17	13	3						5	77
9 ^o -9 ^u	3	30	8	16	5	3					3	68
10 ^o -10 ^u	6	28	9	20	11	10					1	85
11 ^o -11 ^u	5	21		7	13	7	2	2			2	59
12 ^o -12 ^u	5	20	3	6	12	40	4	19			2	111
13 ^o -13 ^u	9	16	1	1	7	25	11	11	1		5	87
14 ^o -14 ^u	7	8		1	1	6	10	17	3	3	14	70
15 ^o -15 ^u	7	1			1	3	3	8		2	9	34
16 & over	34	1			2		3	4	2	3	50	99
TOTAL	82	175	74	71	55	94	33	61	6	8	101	760

TABLE V.
COMPARISONS OF REFERRED CASES IN NATIONALITY GROUPS

NATIONALITY	No. Referred	No. 6-15 yrs.	No. in Honolulu	% School age Cases referred per 1,000 Pop.	Behavior Problems	SCHOOL PROGRESS											
						1st.-4th.		5th.-11. S.		Opportunity		Wainano		Not in School			
						No.	%	No.	%	No.	%	No.	%	No.	%		
						No.	%	No.	%	No.	%	No.	%	No.	%		
Porto Rican	39	30	279	107.53	6 15%	13 33%	1 2%	8 21%	8 21%	9 23%							
Portuguese	164	149	2,128	78.95	34 21%	47 28%	21 13%	68 41%	11 7%	17 10%							
Port.-Other Caucasian	21	19			10 48%	7 33%	1 5%	6 29%	3 14%	4 19%							
Filipino	26	24	353	67.99	7 27%	10 38%	6 23%	6 23%	2 8%	2 8%							
Haw'n & Part-Haw'n	239	196	3,655	53.63	66 28%	70 29%	31 13%	59 25%	39 16%	40 17%							
Spanish	8	5	139	35.97	5 62%	2 25%	1 12½%	1 12½%	0 0	4 50%							
Korean	17	16	511	31.31	4 24%	1 76%	1 6%	0 0	0 0	3 18%							
Others	14	9	369	24.39	8 57%	3 22%	2 14%	3 22%	1 7%	5 36%							
Chinese	75	64	3,673	17.42	10 13%	47 63%	8 10½%	5 7%	7 9%	8 10½%							
Japanese	136	128	8,547	14.98	15 11%	71 52%	32 23%	18 13%	9 6%	6 4%							
Other Caucasians	21	15	1,170	12.82	9 43%	11 52%	4 19%	1 5%	2 10%	3 14%							
TOTAL	760	655	20,824	31.45	174 23%	294 38%	108 14%	175 23%	82 11%	101 13%							

TABLE VI.
BINET AND PORTEUS MAZE TEST RESULTS OF REFERRED CASES

NATIONALITY	Total No.	Median Chronological Age	PORTEUS MAZE					BINET				
			No.	Average Binet I.Q.	I.Q.	S. D. of Distrb.	S. E. of	No.	Average Maze I.Q.	Median I.Q.	S. D. of Distrb.	S. E. of
Porto Rican	39	12.28	37	64.4	65.0	12.84	8.66	36	69.98	67	21.86	14.74
Portuguese	164	11.73	163	71.22	71.29	11.08	7.47	154	73.5	72.5	18.60	12.55
Port.—Other Caucasian	21	10.2	21	71.09	72.0	14.19	9.57	21	81.5	74.5	26.25	17.71
Filipino	26	12.65	26	70.65	71.17	11.18	7.54	22	83.09	83.8	21.75	14.67
Hawaiian & Part-Hawaiian	239	12.35	237	69.	71.4	13.89	9.37	223	84.32	84.97	24.47	16.51
Spanish	8	14.4	8	69.5	69.5	9.92	6.69	8	83.75	82.84	17.63	11.89
Korean	17	8.78	17	82.9	83.67	13.22	8.92	16	90.9	89.5	18.66	12.59
Others	14	13.4	13	71.9	70.75	11.36	7.66	12	84.58	82.84	23.39	15.78
Chinese	75	12.38	74	74.	74.7	13.54	9.13	65	76.1	75.84	19.30	13.02
Japanese	136	11.9	136	75.3	75.75	16.88	11.39	117	84.27	86.27	22.13	14.93
Other Caucasians	21	12.15	21	82.1	83.25	15.5	10.52	20	85.	87.5	21.70	14.64
TOTAL	760	12.09	753	72.32	72.72	14.32	9.65	695	80.94	70.31	22.90	15.45

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